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Draft Environmental Impact Report/Statement

Tent City

Boston, Massachusetts

Errata

Prepared for:
City of Boston
City Hall
Boston, Massachusetts

Prepared by:
Sasaki Associates, Inc.
64 Pleasant Street
Watertown, Massachusetts

July 12, 1985

South End
S 252
TE

Draft Environmental Impact Report/Statement

Tent City

Boston,Massachusetts

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Prepared for:
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64 Pleasant Street
Watertown, Massachusetts

July 12, 1985

ERRATA FOR DRAFT ENVIRONMENTAL IMPACT REPORT/STATEMENT - TENT CITY

THIS ERRATA DATED JULY 12, 1985 AND THE DRAFT ENVIRONMENTAL IMPACT REPORT/STATEMENT AND APPENDICES DATED JULY, 1985 COMPRISE THE FULL AND COMPLETE DRAFT ENVIRONMENTAL IMPACT REPORT/STATEMENT FOR THE TENT CITY PROJECT

ERRATA FOR DRAFT ENVIRONMENTAL IMPACT REPORT/STATEMENT
July 12, 1985

TENT CITY

Boston, Massachusetts

1. Cover Sheet: replace the Cover Sheet with the following revised Cover Sheet.

2. Page 2, 1.1 Purpose and Need for Action, at the end of the third sentence add,

   "In conjunction with the 270 housing units, a parking garage is to be built to accommodate the parking needs of the on-site residential units (129 spaces), Copley Place office tenants component (367 spaces), and on- and off-site retail shoppers (202 spaces)."

3. Page 2, 1.1 Purpose and Need for Action, replace the second sentence with,

   "The project (see Figure 1A) has been designed to respond to the City's need for both low- and moderate-income housing."

   [Please note the designation of two alternative garage entrances shown as Alternative A and Alternative B. All references to Figure 9 should be eliminated and replaced with a reference to Figure 1A.]

COVER SHEET

Project: Urban Development Action Grant. (UDAG)
Tent City EOEA #5406 (Parcels 11A and 11B, South End Urban Renewal Area)

Location:
Boston, (Suffolk County) Massachusetts

Status:
Draft Environmental Impact Statement
Draft Environmental Impact Report

Proponent:
Tent City Corporation

Responsible Agency:
City of Boston (Boston Redevelopment Authority) acting for U.S. Department of Housing and Urban Development

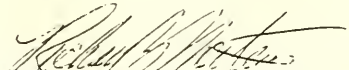
Cooperating Agencies:
Massachusetts Housing Finance Agency, Massachusetts Executive Office of Communities and Development

Agency Contact:
Richard Mertens
Environmental Review Officer
Boston Redevelopment Authority
1 City Hall Square
Boston, MA 02201
(617) 722-4300

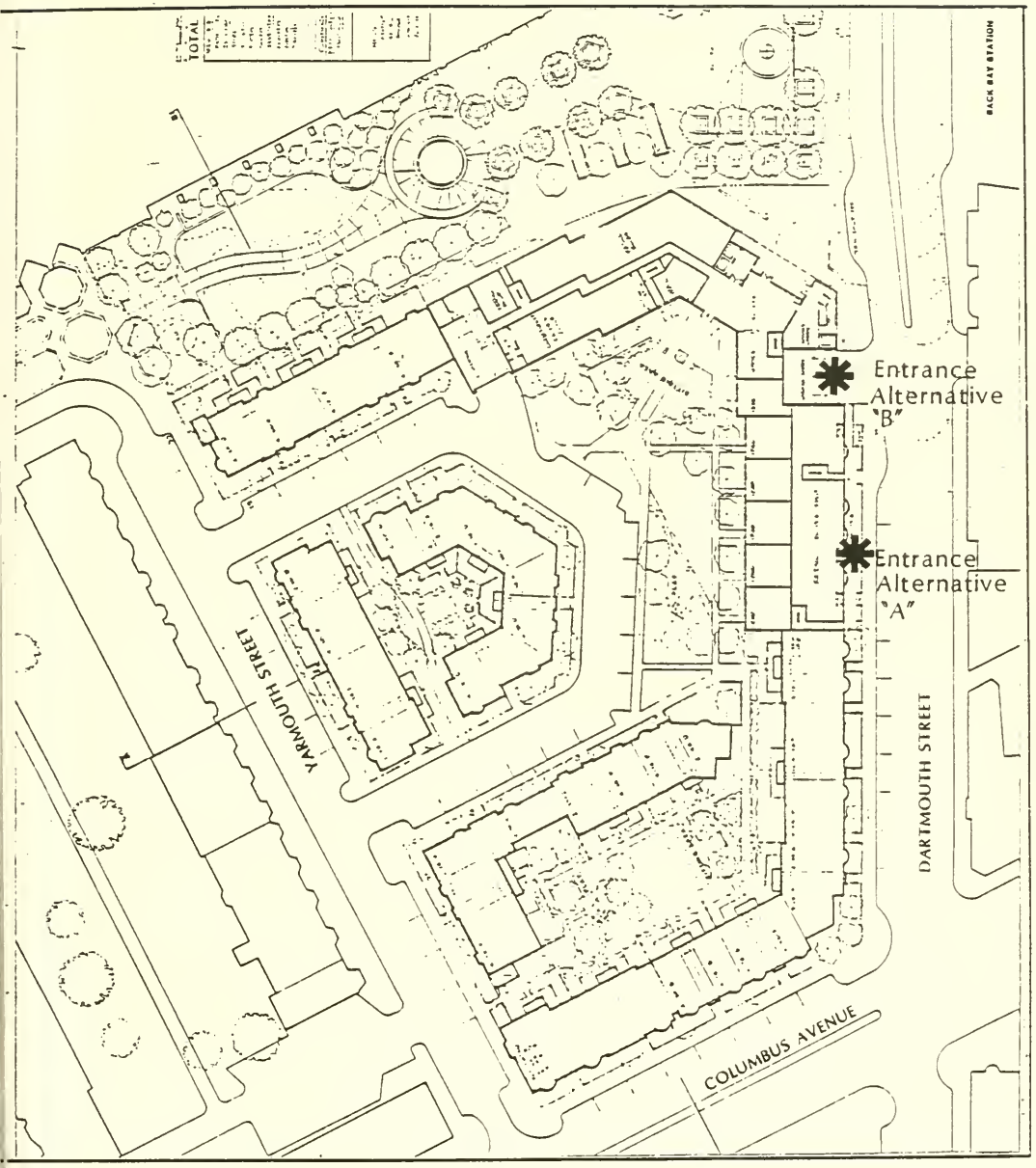
Comments must be received by: September 3 (NEPA)
August 10 (MEPA)

Abstract of the statement:

This statement describes and evaluates the environmental, cultural socio-economic and physical impacts of the Tent City project proposed to be constructed on Parcels 11A and 11B, South End Urban Renewal Area, and bounded by Dartmouth Street, Columbus Avenue, Yarmouth Street and the South West Corridor line in Boston's South End. The project will provide approximately 270 housing units (25% low income, 50% moderate income, 25% market rate), a two level below grade parking structure for 698 cars and up to 7,500 sq. ft. of community retail space. The purpose of the project is to provide increased housing opportunities for low- and moderate-income residents of the South End and to redevelop the largely vacant and underutilized site in a manner that re-establishes the physical character of the surrounding South End historic neighborhood on the site. The project will also provide needed community oriented retail space for the South End neighborhood.



Richard B. Mertens, Environmental Review Officer



Tent City
Boston, Massachusetts

FIGURE 1A
Ground Floor Plan

Scale in feet Approx.
0 100 200

Sasaki Associates, Inc. Watertown, Massachusetts

4. Page 2, 1.2 Goals and Objectives, the second paragraph and first item should be followed by,

   ". provide a parking garage of 698 spaces to support the housing component and to serve project residential and retail parking needs and Copley Place commercial patrons/office tenants;"

5. Page 3, 1.3 Project History, the following sentence should be added to the end of the second paragraph,

   "These guidelines included a provision that called for any housing development to be affordable to South End residents. Specifically, the guidelines called for 25% of any proposed housing development to be affordable to low-income households, 50% to moderate income households and 25% available at market rates."

6. Page 7, add,

   2.2 STUDY ALTERNATIVE GARAGE

   "For purposes of a comparative qualitative assessment of the parking garage with respect to traffic impacts, a smaller garage of 541 spaces was assessed as a study alternative in Section 3.8 - Parking and Traffic. The 541 space study alternative garage is based upon the number of spaces currently on the Tent City Site (276), the difference between the number of spaces approved in the Copley Place EIS/EIR but never built (136), and the number of spaces to be assigned to Tent City residents (129). The results of the comparison indicate an insignificant difference in the effect of the 698 car garage and the 541 car garage on the roadway network in the study area. Additionally, two locations for the garage driveway were evaluated in order to assess the traffic impact associated with either design alternative."

7. Page 8, replace 3.0 IMPACTS OF THE PROPOSED PROJECT AND ALTERNATIVE AND MEASURES TO MITIGATE ADVERSE IMPACTS with,

"3.0 EXISTING CONDITIONS/IMPACTS OF THE PROPOSED PROJECT AND ALTERNATIVE AND MEASURES TO MITIGATE ADVERSE IMPACTS"

8. Page 8, Community Composition (income profile and ethnic diversity), add the following as the first paragraph,

"The current (1980) population of the South End is 27,125 persons. A comparison of South-End population statistics over the past four decades is presented in Table 1A. Between 1950 and 1970 a decline in population occured due to housing demolition for urban renewal. Between 1970 and 1980 housing demolition ebbed and an influx of Asian, Hispanic, and whites led to a slight population increase. This population trend is projected to continue for the next twenty years."

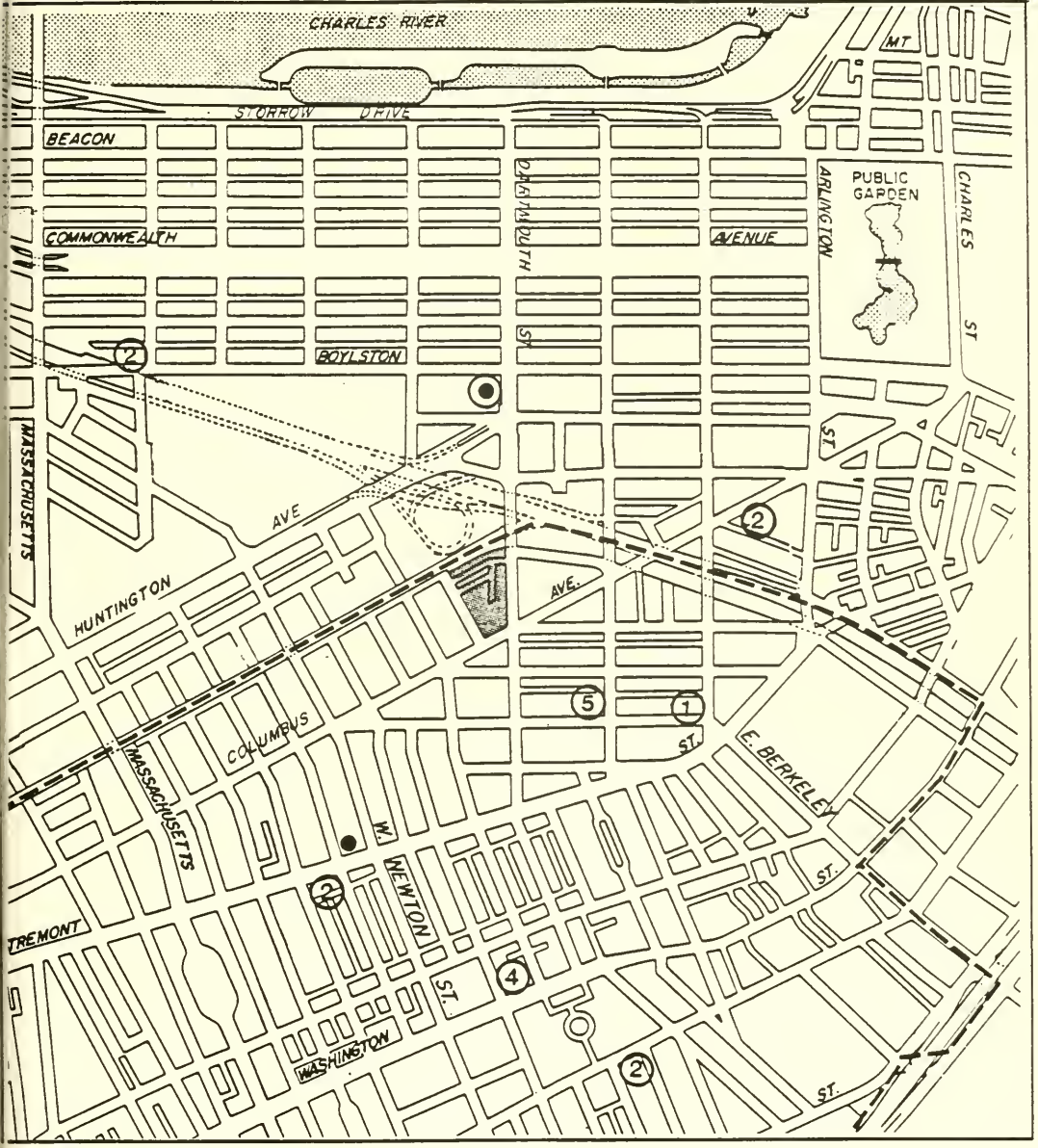
Table 1A

	1950	1960	1970	1980
Population	57,218	35,002	22,680	27,125

Source: Data - 1950, 1960, 1970, 1980 - U.S. Census

9. Page 10, Police Protection, add after the first sentence,

"The district police station (see Figure 4) is located at the corner of Warren Avenue and Berkeley."



Project Site

BRA Planning (Dist. 6)

① Police Station (Dist. D.)

② Fire Station

◉ Main Library

● South End Branch Library

④ Elementary School (K-5)

⑤ Mackey Elementary School

Tent City
Boston, Massachusetts

FIGURE 4
PUBLIC FACILITIES

Scale in feet
0 900 1800

Sasaki Associates, Inc. Watertown, Massachusetts

10. Page 23, insert at the end of section 3.3.2 the following new paragraph,

"Alternatives to the demolition of the freestanding buildings on Harwich, Yarmouth and Dartmouth Streets have been extensively studied by the project's architect. Preservation of these buildings is considered impractical for the following reasons:

- The midrise segment of the Dartmouth Street facade could not be built, resulting in the loss of the desired transition of the building mass from four-story residential scale of the adjacent South End neighborhood to the high-rise urban scale of Copley Place and Copley Square farther to the north.

- Architectural integration of the remaining building fragments would prove to be aesthetically inappropriate and difficult to physcially unify. Construction of the housing and garage could be accomplished only at an inordinately high cost.

- The below grade garage could not be efficiently designed and built with the above mentioned existing structures remaining on the site. The resulting smaller garage would undermine the economic feasibility of the total project. Construction costs of building around the existing structures would be prohibitive.

- The Alternative "A" entrance to the garage (See Figure 1A of the errata document) could not be constructed if the existing structures on Dartmouth Street remain.

- The integration of the new construction around the existing buildings would result in a substantial decrease in the number of new housing units. This resultant decrease in housing units would diminish the expressed city and neighborhood goals for the project.

The proposed Tent City project will result in the following public benefits:

- Provision of 270 housing units, 75% for low and moderate income residents and 25% at market rates.

- The removal of urban blight and deteriorating structures, most of which are not suitable for occupancy and pose a physical hazard.

- Needed additional off-street parking spaces for Tent City residents and Copley Place office employees, commercial and retail patrons.

- Reestablishment of the fragmented urban fabric (now a physical void) and reintegration of the site with the surrounding South End neighborhood.

- A renewal of the district's architectural character."

11. Page 25, replace with,

Spring and Fall Equinoxes (March 21 and September 21)

Shadow conditions at the spring and fall equinoxes are identical. The equinox condition depicts the average shadow to be expected during the majority of the year. The impacts from shadows cast by Tent City and surrounding buildings are described below and represented for 9:00 AM, 12:00 PM and 3:00 PM in Figures 17-19.

. Southwest Corridor Deck

The deck will be predominantly in shadow from Tent City only during the early morning hours (Figure 17). By noontime (Figure 18) the shadows will be ±30-60 foot and confined primarily to the section of the deck adjacent to Dartmouth Street. In midafternoon (3:00 PM) the project will have no shadow impact on the deck. (See Figure 19).

. Dartmouth Street

The project will cast ±15-35 foot shadows on the Tent City side of Dartmouth Street at noontime (Figure 18) and ±70-150 foot shadows across Dartmouth Street in the mid-afternoon. (See Figure 19).

. Columbus Avenue

The project will result ±10-15 foot shadows along the sidewalks on the Tent City side of Columbus Avenue in the mid-afternoon. (See Figure 19).

. Yarmouth Street

The project will result in ±10-15 foot shadows at certain points along the sidewalks on the Tent City side of Yarmouth Street in the morning (9:00 AM). (See Figure 17).

Summer Solstice (June 21)

At the summer solstice, the sun is at its highest position and shadows are shorter than at any other time of the year. The impacts of the summer solstice are described below and depicted for 9:00 AM, 12:00 PM, and 3:00 PM in Figures 20-22.

. Southwest Corridor Deck

The midrise portion of the project will cast ±80 foot shadows across a portion of the deck in the morning (9:00 AM) and a ±30 foot shadow from the four story portion of the project facing the deck. (See Figure 20).

At noontime the project will cast ±15-25 feet shadows along the deck and a ±35 foot shadow from the midrise entrance towards Dartmouth Street. (See Figure 21).

12. Page 26, Winter Solstice (December 21), and Southwest Corridor Deck replace with,

    Winter Solstice (December 21)

    At the winter solstice the sun is at its lowest position in the sky, and shadows are longer than at any other time of the year. The impacts of the winter solstice are described below and depicted for 9:00 AM, 12:00 PM, and 3:00 PM in Figures 23-25.

    . Southwest Corridor Deck

      In the morning (9:00 AM) the entire deck will be in shadow from the project (see Figure 23). At noontime the project will cast ±60-110 foot shadows across the majority of the deck (see Figure 24). In the afternoon (3:00 PM) only the Dartmouth Street entrance to Tent City and a small portion of the deck will be in shadow. (See Figure 25).

13. Page 27, first paragraph, last sentence, the reference to Table 5 should be to Table 7.

14. Page 27, Surficial Geology and Structures, first paragraph, last sentence, replace with,

    "A brief description of the soils and rock strata at the site is presented in Table 7A."

Table 7A

SUBSURFACE PROFILE DESCRIPTION

THICKNESS RANGE (FT)	STRATUM	GENERAL DESCRIPTION
20-25	Fill Material	Loose to compact sand, gravel and demolition debris (i.e., bricks, concrete, etc.)
6-14.5	Organic Silt and Shells	Soft to medium stiff gray organic, slightly sandy silt derived from mud flat deposits.
2- 5	Medium to Fine Sand	Dense medium to fine lensing, fine sand, little silt and gravel, isolated locations.
2- 2.5	Peat	Partially decomposed mosses, sedges, and marsh vegetation.
4-11	Yellow-Blue Clay	Medium dense, stiff to hard yellow to blue, silty clay with slight occasional gravel.
3-74	Blue Clay	Hard to stiff blue clay commonly referenced as "Boston Blue Clay".
5- 7'	Glacial Till	Compact, dense, gray, mixture of clay, silt, sand, gravel, cobbles, and boulders.
	Argillite Bedrock	Gray slate composed of silt and clay particles.

15. Page 28, Groundwater, first sentence, replace with,

    "Historically, average groundwater levels in the vicinity of the site have fluctuated between -1.5 to +2.2 (NGVD) and as much as -8.4 to +2.2 (NGVD) (between -2.75 to +7.85 (BCB)) as the result of development and leaking and ruptured water and sewer lines."

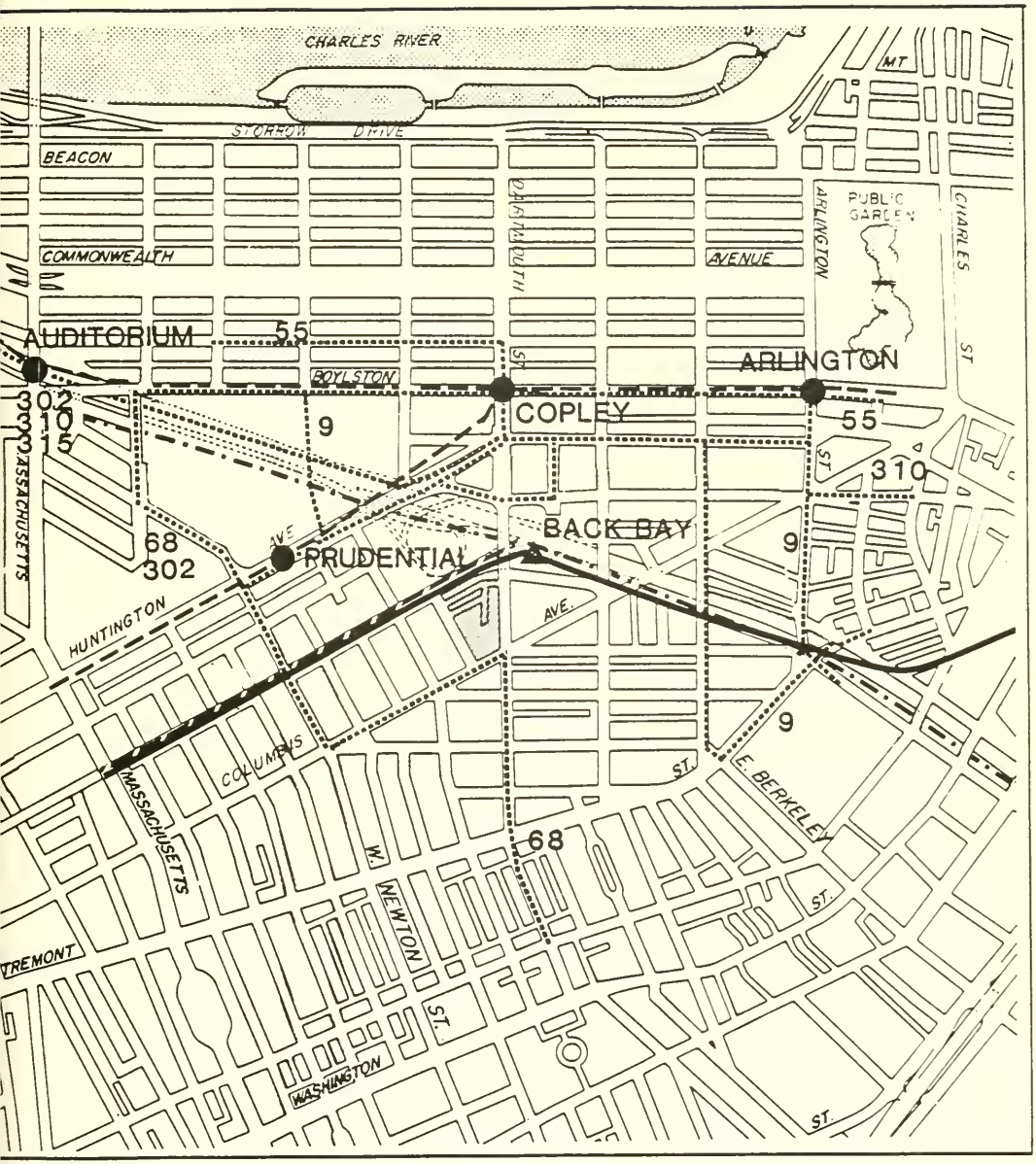
    In the second sentence, reference to date of Haley and Aldrich boreholes should be 1982.

16. Page 28, Section 3.5.2 - Probable Impacts, first paragraph, second sentence, the reference at the end of the sentence should read (Haley & Aldrich, 1982).

17. Page 30, Table 8, reference to Figure 17 should be to Figure 30.

18. Page 31, Table 9, total of 66,270 should be 66,720.

19. In Section 3.8 - Parking and Traffic, replace Figures 34 and 35 with the following revised Figures 34 and 35,



Project Site

Rapid Transit Station

Proposed Commuter Rail (1987)

Bus Routes

Commuter Rail

Orange Line MBTA (1987)

Green Line MBTA

Commuter Rail/Rapid Transit Station

Tent City

Boston, Massachusetts

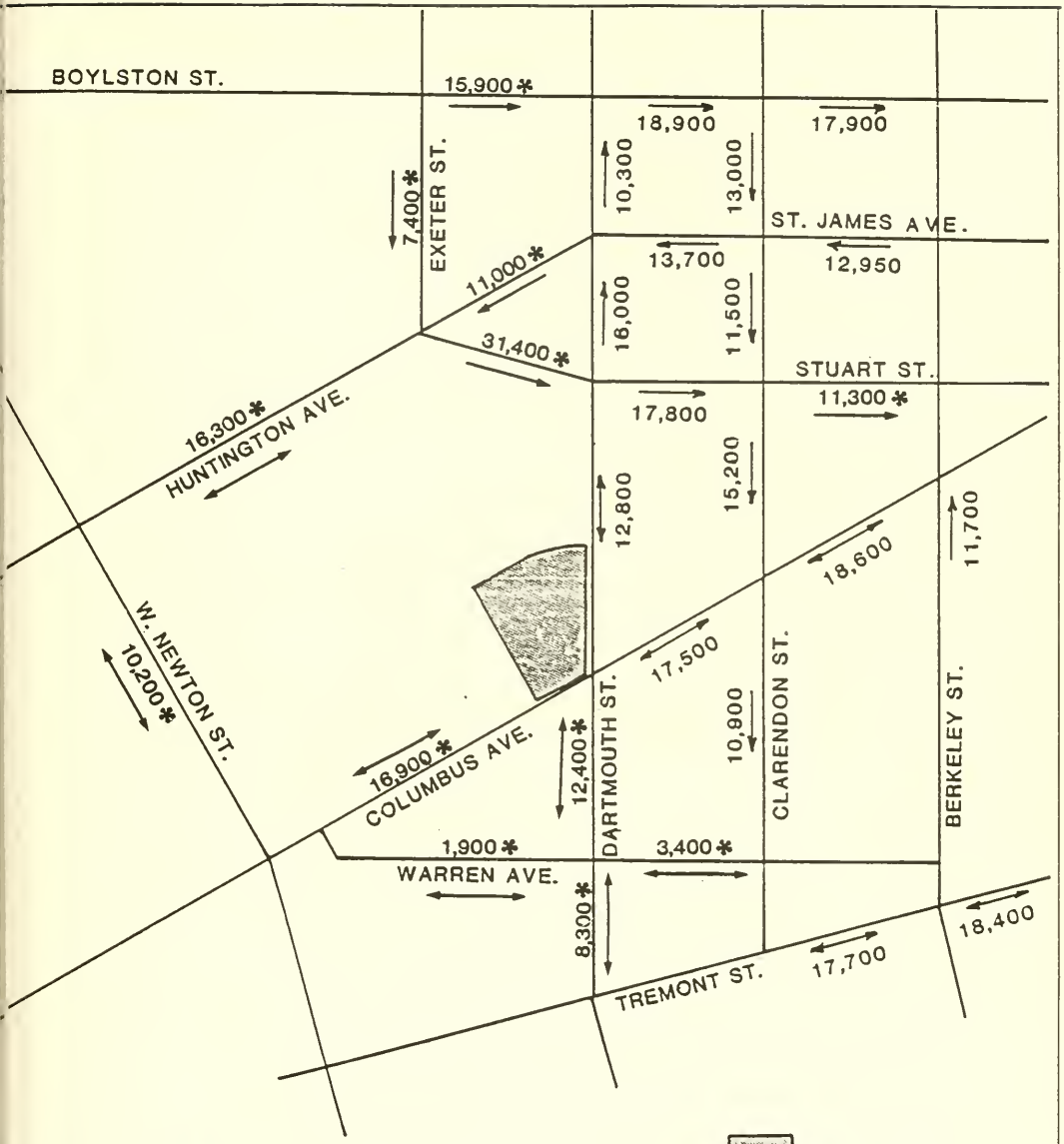
FIGURE 34

PUBLIC TRANSPORTATION FACILITIES

Scale in feet

0 900 1800

Sasaki Associates, Inc. Watertown, Massachusetts



ote: Only Streets Included in the Analysis are Shown.

ADT Values extrapolated from peak hour volumes by Sasaki Associates, Inc.

Tent City
Boston, Massachusetts

FIGURE 35
EXISTING DAILY TRAFFIC (1984)

Not to Scale

Sasaki Associates, Inc. Watertown, Massachusetts

20. Page 35, replace the first paragraph with,

"The proposed garage that is assessed as part of the Tent City project in this EIR/EIS is a two-level below grade structure with parking for 698 cars. This size garage has been developed throughout the design of Tent City in conjunction with the residential and retail components of the project. Additionally, in order to assist the Tent City Corporation in an evaluation of the environmental and community impacts of the proposed 698-space garage, a supplemental impact analysis was conducted for a smaller 541-space garage for the project. Lastly, two locations for the garage driveway have been evaluated in order to assess the traffic impact associated with either design alternative (See Figure 1A).

21. Page 35, replace the fourth paragraph with,

The assessment of the proposed 698-space garage and the 541-space study alternative garage as well as a discussion of the alternative garage driveway locations are presented in Section 3.8.2-Probable Impacts, are

22. Page 36, paragraph 4, replace the second sentence with,

"However, the average annual growth rate for these segments, based on the available data, is approximately 3.0 percent."

23. Page 38, replace the third paragraph, with,

"The egress point from the proposed parking garage under Alternative A is located on Dartmouth Street, 240 feet north of Columbus Avenue and 740 feet south of Stuart Street while Alternative B is approximately 90 feet further to the north and opposite the New England Life Garage (National Garage). A queue analysis was performed to assess the effect of traffic queues extending from these two intersections back to the garage driveway. Current maximum queue lengths on Dartmouth Street from Columbus Avenue are 42± feet during the morning peak and 58± feet during the afternoon peak. Maximum queue lengths from Stuart Street are 54± feet during the morning peak and 56± feet during the afternoon peak."

24. Page 41, Trip Generation and Trip Attractions add, between the second and third paragraphs,

"Trips generated by future development in the vicinity of the site are presented in Table 12A."

Table 12A

1989 VEHICLE TRIPS GENERATED BY OTHER NEW DEVELOPMENT

Development	Daily	AM Peak Hour	PM Peak Hour
Copley Place	7,740	529	780
Hynes Auditorium	1,920	50	500
One Exeter Place	726	114	117
Four Seasons	974	82	82
399 Boylston Street	852	151	155
Arlington St./Hadassah Way	1,284	138	147
Prince School	355	23	28
Hancock Building Renovation	1,260	221	221
State Transportation Building	2,120	400	400
500 Boylston Street	3,368	530	624
National Garage	600	180	180
TOTAL	21,199	2,418	3,234

SOURCE: 500 Boylston Street Project, 1984

These developments have been incorporated in the analysis under both the No-Build and Build scenarios, except for the analyses made for the garage driveway under Alternative B. In that alternative, the National Garage expansion plans (which have recently been dropped) are excluded from these analyses in order to present a more up-to-date assessment of traffic conditions at this intersection. Conversely, the expansion has been included in the Alternative A analysis for the garage to indicate that the site garage driveway can be expected to operate satisfactorily as an unsignalized intersection, with or without the expansion of the National Garage.

25. Page 47, Traffic Assignment, third paragraph, add,

"Incremental increases in future traffic with and without the project are presented in Tables 21A and 21B.

Table 21A. AM Peak Hour Traffic Increases on Study Area Roadways.

Street	From	To	1988 Without Project	1988 With Project	Difference	Percent Difference
Huntington	W. Newton	Exeter	1,461	1,469	8	0.6
Stuart	Exeter	Dartmouth	2,320	2,368	48	2.1
W. Newton	Huntington	Columbus	662	677	15	2.3
Columbus	W. Newton	Dartmouth	1,488	1,511	23	1.6
Columbus	Dartmouth	Clarendon	1,451	1,459	8	0.6
Warren	Dartmouth	Clarendon	244	260	16	6.6
Dartmouth	Garage Access	Stuart	1,114	1,205	91	8.2
Dartmouth	Stuart	St. James	1,611	1,654	43	2.7
Dartmouth	St. James	Boylston	1,273	1,298	25	2.0
Dartmouth	Garage Access	Columbus	975	1,036	61	6.3
Dartmouth	Columbus	Warren	1,028	1,058	30	2.9
Clarendon	Boylston	St. James	1,347	1,355	8	0.6
Clarendon	St. James	Stuart	1,078	1,086	8	0.7
Clarendon	Stuart	Columbus	807	815	8	1.0

Table 21B. PM Peak Hour Traffic Increases on Study Area Roadways.

Street	From	To	1988 Without Project	1988 With Project	Difference	Percent Difference
Huntington	W. Newton	Exeter	2,292	2,306	14	0.6
Stuart	Exeter	Dartmouth	2,757	2,843	86	3.1
W. Newton	Huntington	Columbus	966	997	31	3.2
Columbus	W. Newton	Dartmouth	1,610	1,655	45	2.8
Columbus	Dartmouth	Clarendon	1,257	1,271	14	1.1
Warren	Dartmouth	Clarendon	239	267	23	11.7
Dartmouth	Garage Access	Stuart	1,149	1,331	182	15.8
Dartmouth	Stuart	St. James	1,719	1,815	96	5.6
Dartmouth	St. James	Boylston	1,216	1,272	56	4.6
Dartmouth	Garage Access	Columbus	994	1,113	119	12.0
Dartmouth	Columbus	Warren	861	921	60	7.0
Clarendon	Boylston	St. James	1,002	1,016	14	1.4
Clarendon	St. James	Stuart	970	984	14	1.4
Clarendon	Stuart	Columbus	735	749	14	1.9

26. Page 49, first sentence, replace with,

"The capacity analysis results for the Build alternative are presented in Table 23 with the driveway location under Alternative A."

27. Page 49, third paragraph, first sentence, replace with,

"The maximum queue along the southbound Dartmouth Street approach at Columbus Avenue will be 63± feet in the morning and 112± feet in the afternoon, well below the distance between the garage driveway and Columbus Avenue under either driveway location alternative. Under Alternative B, the Tent City garage driveway will be located opposite the National Parking Garage driveway. The results of the capacity analysis are presented in Appendix 5 and indicate marginal requirements for signalization at this intersection."

28. Page 50, replace Table 23 with the following table,

Table 23. Capacity analysis - build alternative (1988) 698-space garage.

Signalized Intersection	Capacity	AM Peak Volume (vph)	AM Peak V/C*	AM Peak Level of Service	PM Peak Volume (vph)	PM Peak V/C*	PM Peak Level of Service
Boylston/Dartmouth	1425	920	0.65	B	961	0.67	B
Boylston/Clarendon	1425	1,122	0.79	C	963	0.68	B
St. James/Dartmouth	1375	797	0.58	A	1,239	0.90	D-E
St. James/Clarendon	1500	894	0.60	A	931	0.62	B
Huntington/W. Newton	1425	796	0.56	A	1,084	0.76	C
Huntington/Exeter**	1425	655	0.46	A	833	0.58	A
Stuart/Dartmouth	1425	821	0.58	A	901	0.63	B
Stuart/Clarendon**	1500	666	0.44	A	703	0.47	A
Columbus/W. Newton	1500	808	0.54	A	986	0.66	B
Columbus/Dartmouth	1500	965	0.64	B	942	0.63	B
Warren/Dartmouth**	1500	532	0.35	A	498	0.33	A
Tremont/Berkeley	1500	887	0.59	A	954	0.64	B
Columbus/Clarendon	1500	789	0.53	A	1,194	0.80	C

Unsignalized Intersection	Critical Movement	AM Peak Capacity (pcph)	AM Peak Vol. (pcph)	AM Peak Level of Service	PM Peak Capacity (pcph)	PM Peak Vol. (pcph)	PM Peak Level of Service
Dartmouth/Garage Access-Egress**	Garage egress left turn	177	41	C***	197	176	D***

*Volume/Capacity Ratio

**Intersections not analyzed in previous studies.

***Adjacent signals provide greater gaps for turn movements, thereby improving Level of Service to "C" in AM and "D" in PM.

Note: The AM/PM Critical Peak Hour Volume for the Boylston/Dartmouth intersection is the same for the Build and No-Build Alternative because the volume from development is on non-critical movements.

29. Page 51, replace with,

Study Alternative - 541 Space Garage

Based on the analysis of the 698-space garage, two intersections are expected to operate at Level of Service "D-E", St. James Avenue at Dartmouth Street and the proposed parking garage driveway at Dartmouth Street. A reduction in the parking component of the project to 541 spaces will minimally improve the operating characteristics of these intersections (Appendix 5), even though the retail parking space component is significantly less. The levels of service for both intersections remain unchanged and underscore the nominal traffic impact of the proposed development under either 'Build' alternative. As with the 698-space garage analysis, the garage driveway is analyzed under Alternative A.

Table 24 presents the capacity analysis for the 541-space study alternative garage for the 1988 build alternative.

Table 24. Capacity analysis - build alternative (1988) 541-space garage alternative.

		AM Peak			PM Peak		
Intersection	Capacity	Volume (vph)	V/C*	Level of Service	Volume (vph)	V/C	Level of Service
St. James/Dartmouth	1375	796	0.58	A	1233	0.90	D-E

		AM Peak			PM Peak		
Intersection	Critical Movement	Capacity (pcph)	Vol. (pcph)	Level of Service	Capacity (pcph)	Vol. (pcph)	Level of Service
Dartmouth/Garage Access-Egress**	Garage egress left turn	184	38	C***	194	99	D***

*Volume/Capacity Ratio

**Intersections not analyzed in previous studies.

***Adjacent signals provide greater gaps for turn movements, thereby improving Level of Service to "C" in the AM and "D" in the PM.

Under Alternative B, signalization is not required for the garage driveways. Based upon the capacity analysis shown above the levels of service (in conjunction with operation of adjacent signals) will be adequate under stop sign control and will not require signalization.

3.8.3 Mitigation Measures

With the garage driveway located as in Alternative A, the proposed development with either a 541-space or a 698-space parking garage is expected to result in a minimal traffic impact in comparison with the impact associated with the No-Build alternative. The existing street and traffic control system has sufficient reserve capacity to accommodate the increment of new demand generated on the site as well as traffic growth associated with other future development in the area. Where bottlenecks occassionally occur, they are principally the result of illegal curbside or double-parking which blocks the through travel lanes. Consequently, no major measures are necessary to mitigate the impacts of Tent City traffic. This concurs with the results of a previous assessment of Tent City traffic as reported by Skidmore, Owings, and Merrill (1985).

With the entrance located as in Alternative B, the traffic conditions associated with the 698-space garage marginally indicate the need for signal installation. Given this marginal situation it is recommended that traffic conditions at this intersection be observed and a signal installed at a later date, if warranted.

30. Page 56, paragraph 3, last sentence, replace with,

"Current noise levels at receptors 3 and 4 reach 73 decibels as a result of the high volumes of automobile and truck traffic along Stuart Street and Dartmouth Street."

31. Page 56, paragraph 4, replace with,

"High volumes of automobile and truck traffic (3%) along Columbus Avenue also resulted in high noise levels of 74 decibels at receptors 1 and 2. Noise levels by 1988 will reach 75 decibels at buildings along this street."

32. Page 57, first sentence, replace with,

"By 1988, noise levels in the vicinity of the site will reach 76 decibels due to background traffic growth."

33. Page 57, second paragraph, first sentence, replace with,

"The traffic to be generated by Tent City will not increase noise levels above those which will occur due to the background traffic growth (growth unrelated to the development of Tent City), 75 to 76 decibels."

34. Page 57, 3.10.3 Mitigation Measures, Long-Term, replace with,

"While noise levels along Columbus Avenue and Dartmouth Street are high according to HUD criteria, the double glazed windows that will be installed for energy conservation purposes may reduce outside noise levels by more than 10 decibels. To get a good noise reduction the windows must be closed at all times and there must be no leaks in the walls. Approximately two-thirds of the bedrooms will face away from Dartmouth Street and Columbus Avenue which are the major noise generators. Additionally, air conditioners may be installed allowing windows to remain closed to reduce outside noise."

35. Page 66, 9.0 - List of Preparers, after first paragraph add the following paragraph,

"Sasaki Associates, Inc. hereby certifies that neither its officers nor its employees have any financial or other non-technical interest in the Tent City project. The findings reported in this document reflect best professional judgement and disclosures of available environmental data."

36. On page 68, replace the submittal list with the following list.

10.0 LIST OF AGENCIES AND PERSONS TO WHOM COPIES HAVE BEEN SENT

U.S. Environmental Protection Agency
Office of Federal Activities
Room A-104
401 M Street, N.W.
Washington, DC 20460

Council on Environmental Quality
722 Jackson Place, N.W.
Washington, DC 20006

U.S. Environmental Protection Agency - Region I
Office of Government Relations and Environmental Review
JFK Federal Building
Boston, MA 02203

U.S. Environmental Protection Agency
Air Management Division
JFK Federal Building
Boston, MA 02203
Attention: Thomas Wholly

U.S. Department of Housing and Urban Development
Regional Office
JFK Federal Building
Boston, MA 02203
Attention: Mr. John C. Mongan
Regional Administrator - Regional Housing Commissioner

Advisory Council on Historic Preservation
Office of Architectural and Environmental Preservation
1100 Pennsylvania Avenue NW
Washington, DC 20004

Director
Environmental Project Review
Main Interior Room 4239
U.S. Department of the Interior
Washington, DC 20240

U.S. Department of Transportation
Federal Highway Administration
Boston Area Office
Transportation Systems Center
55 Broadway
Cambridge, MA 02142

U.S. Department of Transportation
Urban Mass Transportation Administration
Region I
Transportation Systems Center
55 Broadway
Cambridge, MA 02142

James Hoyte, Secretary
Executive Office of Environmental Affairs
100 Cambridge Street
Boston, MA 02202

State Clearinghouse
100 Cambridge Street, 9th Floor
Boston, MA 02202

Metropolitan Area Planning Council
110 Tremont Street, 5th Floor
Boston, MA 02108

Massachusetts Historical Commission
80 Boylston Street
Boston, MA 02116
Attention: Valeria Talmage

Department of Environmental Quality Engineering
Northeast Regional Office
Air Quality Section
323 New Boston Street
Woburn, MA 01801

Department of Environmental Quality Engineering
Division of Air Quality Control
One Winter Street, 8th Floor
Boston, MA 02108
Attention: Mr. Barry Porter

Department of Community Affairs
Leverett Saltonstall Building
100 Cambridge Street
Boston, MA 02202

Massachusetts Housing Finance Agency
50 Milk Street
Boston, MA 02109

Executive Office of Transportation and Construction
10 Park Plaza
Boston, MA 02116

Massachusetts Bay Transportation Authority
Southwest Corridor Project
10 Park Plaza
Boston, MA 02116

Department of Public Works
Environmental Section
100 Nashua Street
Boston, MA 02114

Office of the Mayor
City of Boston
Boston City Hall
Boston, MA 02201

Mr. Steven Coyle, Director
Boston Redevelopment Authority
Boston City Hall
Boston, MA 02201

Boston Landmarks Commission
Boston City Hall, Room 805
Boston, MA 02201

Public Works Department
City of Boston
Boston City Hall
1 City Hall Square
Boston, MA 02201

Traffic and Parking Department
City of Boston
Boston City Hall
1 City Hall Square
Boston, MA 02201

City of Boston
The Environmental Department
Boston City Hall, Room 805
Boston, MA 02201
Attention: Air Pollution Control Commission

Boston Water and Sewer Commission
10 Post Office Square
Boston, MA 02109
Attention: Charles Button

City of Boston Environmental Department
Boston City Hall, Room 805
One City Hall Square
Boston, MA 02201
Attention: Lorraine Downey

Hon. Edward M. Kennedy
2400 JFK Federal Building
Boston, MA 02203

Hon. John Kerry
2200 JFK Federal Building
Boston, MA 02203

Hon. Thomas P. O'Neill, Jr.
2200 JFK Federal Building
Boston, MA 02203

Hon. Royall Bolling, Sr.
Room 413F State House
Boston, MA 02133

Hon. Byron Rushing
Room 167K State House
Boston, MA 02133

Hon. Joseph Tierney, President
Boston City Council
City Hall
One City Hall Square
Boston, MA 02201

Hon. James Kelly
Boston City Council
City Hall
One City Hall Square
Boston, MA 02201

Hon. Thomas Menino
Boston City Council
City Hall
One City Hall Square
Boston, MA 02201

Ellis Neighborhood Association, Inc.
52 Chandler Street
Boston, MA 02116
Attention: Kenneth J. Gritter

The Boston Preservation Alliance
45 School Street
Boston, MA 02108
Attention: Susan Park

South End Historic Society
696 Tremont Street
Boston, MA 02120

Mr. Pat Cusick
SNAP
554 Columbus Avenue
Boston, MA 02118

Mrs. Mary Maneul
Methunion Cooperative Corporation
405 Columbus Avenue
Boston, MA 02116

South End Project Area Committee
20 Union Park
Boston, MA 02118

Urban Investment and Development Co.
1 Copley Place
Boston, MA 02116
Attention: Mr. Gorden Hislop

Neighborhood Association of the Back Bay
Fritz Casselman
Bromberg, Sunstein & McGregor
31 Milk Street
Boston, MA 02109

37. Page 71, Letters of Comment on the Environmental Notification Form in this section belong in the previous section 11.0 ENVIRONMENTAL NOTIFICATION FORM AND LETTERS OF COMMENT. The following letters indicating Federal scoping concurrence should be added.

Boston Redevelopment Authority

January 25, 1985

Mr. Sheldon Gilbert
Regional Environmental Officer
U.S. Department of Housing and
Urban Development
Boston Regional Office Region I
15 New Chardon Street
Boston, MA 02114

Re: Tent City UDAG

Dear Sheldon:

I am enclosing for your information a copy of the scope for a combined EIR/EIS for the Tent City UDAG project, which has been developed on the basis of comments presented at the Consultation/Scoping meeting held on January 17, 1985, written comments received, and review by staff of both the MEPA office and the BRA. This scope has been issued by the Secretary of Environmental Affairs and has been adopted by the City as fulfillling the Federal scoping requirements.

Should you have any comments or questions, please do not hesitate to contact me.

Sincerely,

Richard B. Mertens
Environmental Review Officer

1 City Hall Square
Boston, Massachusetts 02201
(617) 722-4300
Boston Redevelopment Authority is an Equal Opportunity / Affirmative Action Employer

Boston Redevelopment Authority

January 25, 1985

Mr. Donald Cooke
Environmental Impact Office
U.S. Environmental Protection Agency
J.F. Kennedy Federal Building
Boston, MA 02203

Re: Tent City UDAG

Dear Don:

I am enclosing for your information a copy of the scope for a combined EIR/EIS for the Tent City UDAG project, which has been developed on the basis of comments presented at the Consultation/Scoping meeting held on January 17, 1985, written comments received, and review by staff of both the MEPA office and the BRA. This scope has been issued by the Secretary of Environmental Affairs and has been adopted by the City as fulfilling the Federal scoping requirements.

Should you have any comments or questions, please do not hesitate to contact me.

Sincerely,

Richard B. Mertens
Environmental Review Officer

1 City Hall Square
Boston, Massachusetts 02201
(617) 722-4300
Boston Redevelopment Authority is an Equal Opportunity / Affirmative Action Employer

38. Appendices, Appendix 1: Project History, delete the following section,

"Tent City - A Chronology 1966-1984". This Appendix should include only the Executive Summary", Tent City Associates.

39. Appendix 2: Relocation Plan, add the following text on page 2 of Tent City - Relocation Plan, May 13, 1985 last paragraph, replace the first sentence with,

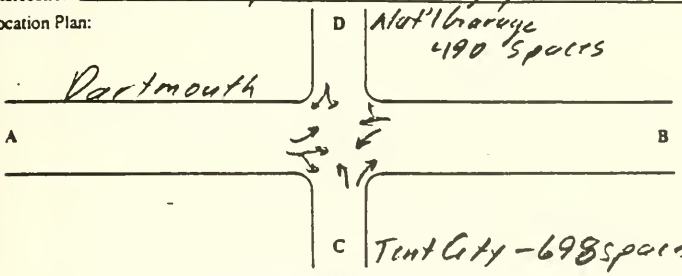
"The level and type of services and payments will conform to provisions of the Uniform Relocation Act and Chapter 79A, M.G.L. with special increases for those moving permanently to cover the excessive differential between on-site housing and surrounding South End rentals."

40. Appendix 5: Parking and Traffic, add the following sheets.

Unsignalized Intersection Capacity Calculation Form

Intersection Dartmouth / Nat'l Garage / Tent City Garage

Location Plan:



Counts:
Date 1984 - Build
Day Weekday
Time AM Peak
Control Stop on C, D
Prevailing Speed 30

Hourly Demand Traffic Volumes from ____ to ____ : ____ m

Approach	A ←			B →			C ↖			D ↗		
Movement	A_L ↙	A_T →	A_R ↖	B_L ↖	B_T ←	B_R ↙	C_L ↖	C_T ↑	C_R ↖	D_L ↘	D_T ↑	D_R ↗
Volume	159	323	135	90	404	106	41	0	27	12	0	18
pch (see Table 1)	159			90			41	0	27	12	0	18

Step 1	**Right Turn from C/D**	C_R ↖	D_R ↗
	Conflicting Flows = M_H = (from Fig. 1)	½ A_R + A_T = 68 + 323 = 391 pcph	½ B_R + B_T = 106 + 404 = 510 pcph
	Critical Gap from Table 2 T_g =	5.5 sec	5.5 sec
	Capacity from Fig. 2 =	$M_{No} = M_1 =$ 710 pcph	$M'_{No} = M'_1 =$ 605 pcph
	Demand =	$C_R =$ 27 pcph	$D_R =$ 18 pcph
	Capacity Used =	100 (C_R/M_1) = 3.8 %	100 (D_R/M'_1) = 3 %
	Impedance Factor from Fig. 3 =	$P_1 =$ 0.98	$P'_1 =$ 0.98
____	Shared Lane – See Step 3		
____	No Shared Lane – Available Reserve	$M_1 - C_R =$ 683 pcph	$M'_1 - D_R =$ 585 pcph
	Delay & Level of Service (Table 3)	No Delay A	No Delay A
Step 2	**Left Turn from B/A**	B_L ↖	A_L ↙
	Conflicting Flows = M_H = (from Fig. 1)	A_R + A_T = 135 + 323 = 458 pcph	B_R + B_T = 106 + 404 = 510 pcph
	Critical Gap from Table 2 T_g =	5.0 sec	5.0 sec
	Capacity from Fig. 2 =	$M_{No} = M_2 =$ 745 pcph	$M'_{No} = M'_2 =$ 705 pcph
	Demand =	$B_L =$ 90 pcph	$A_L =$ 159 pcph
	Capacity Used =	100 (B_L/M_2) = 12 %	100 (A_L/M'_2) = 22 %
	Impedance Factor from Fig. 3 =	$P_2 =$ 0.92	$P'_2 =$ 0.84
	Available Reserve =	$M_2 - B_L =$ 655 pcph	$M'_2 - A_L =$ 546 pcph
	Delay & Level of Service (Table 3)	No Delay A	No Delay A
Step 3	**Thru Movement from C/D**	C_T ↑	D_T ↑
	Conflicting Flows = M_H = (from Fig. 1)	½A_R + A_T + A_L + B_L + B_T + ½B_R = 68 + 323 + 159 + 90 + 404 + 106	½B_R + B_T + B_L + A_L + A_T + ½A_R = 53 + 404 + 90 + 159 + 323 + 135
	(M_T & M'_T are used in Step 4)	$M_H = M_T =$ 1150 pcph	$M_H = M'_T =$ 1164 pcph
	Critical Gap from Table 2 T_g =	6.0 sec	6.0 sec
	Capacity from Fig. 2 =	$M_{No} =$ 210 pcph	$M'_{No} =$ 205 pcph
	Adjust for Impedance	$M_{No} \times P_2 \times P'_2 = M_3 =$ 162 pcph	$M'_{No} \times P'_2 \times P_2 = M'_3 =$ 158 pcph
	Demand =	$C_T =$ 0 pcph	$D_T =$ 0 pcph
	Capacity Used =	100 (C_T/M_3) = 0 %	100 (D_T/M'_3) = 0 %
	Impedance Factor from Fig. 3	$P_3 =$ 1	$P'_3 =$ 1

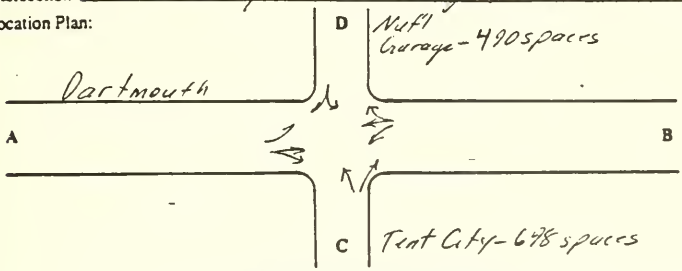
tep 3 (Continued)	C_T ↑	D_T ↑
___ No Shared Lane Available Reserve = Delay & Level of Service (Table 3)	$M_3 - C_T =$ _____ pcph _____ ☐	$M_3' - D_T =$ _____ pcph _____ ☐
___ Shared Lane with Left Turn See Step 4		
Shared Lane Demand = ___ Shared Lane with Right Turn Capacity of Shared Lane = Available Reserve = Delay & Level of Service (Table 3)	$C_R + C_T = C_{RT} =$ _____ pcph $M_{13} = \frac{(C_R + C_T)}{(C_R/M_1) + (C_T/M_3)}$ $M_{13} =$ _____ pcph $M_{13} - C_{RT} =$ _____ pcph _____ ☐	$D_R + D_T = D_{RT} =$ _____ pcph $M_{13}' = \frac{(D_R + D_T)}{(D_R/M_1') + (D_T/M_3')}$ $M_{13}' =$ _____ pcph $M_{13}' - D_{RT} =$ _____ pcph _____ ☐
tep 4 **Left Turn from C/D**	C_L ↰	D_L ↰
Conflicting Flows = M_N = (M_T & M_T' were calculated in Step 3) Critical Gap from Table 2 T_g = Capacity from Fig. 2 = Adjust for Impedance	$M_T + D_T + D_R =$ 1150 + ___ + 18 = 1168 pcph 6.5 sec $M_{No} =$ 175 pcph $M_{No} \times P_2 \times P_2' \times P_1' \times P_3' = M_4$ $M_4 =$ 132 pcph	$M_T' + C_T + C_R =$ 1164 + ___ + 27 = 1191 pcph 6.5 sec $M_{No}' =$ 160 pcph $M_{No}' \times P_3' \times P_2 \times P_1 \times P_3 = M_4'$ $M_4' =$ 121 pcph
✓ ___ No Shared Lane Demand = Available Reserve = Delay & Level of Service (Table 3)	$C_L =$ 41 pcph $M_4 - C_L =$ 91 pcph Very Long Delay E *	$D_L =$ 12 pcph $M_4' - D_L =$ 109 pcph Long Delay D *
Shared Lane Demand = ___ Shared Lane with Thru Capacity of Shared Lane = Available Reserve = Delay & Level of Service (Table 3)	$C_T + C_L = C_{TL} =$ _____ pcph $M_{34} = \frac{(C_T + C_L)}{(C_T/M_3) + (C_L/M_4)}$ $M_{34} =$ _____ pcph $M_{34} - C_{TL} =$ _____ pcph _____ ☐	$D_T + D_L = D_{TL} =$ _____ pcph $M_{34}' = \frac{D_T + D_L}{(D_T/M_3') + (D_L/M_4')}$ $M_{34}' =$ _____ pcph $M_{34}' - D_{TL} =$ _____ pcph _____ ☐
Shared Lane Demand = ___ Shared Lane with Thru & Right Capacity of Shared Lane = Available Reserve = Delay & Level of Service (Table 3)	$C_R + C_T + C_L = C_{RTL} =$ _____ pcph $M_{134} = \frac{C_R + C_T + C_L}{(C_R/M_1) + (C_T/M_3) + (C_L/M_4)}$ $M_{134} =$ _____ pcph $M_{134} - C_{RTL} =$ _____ pcph _____ ☐	$D_R + D_T + D_L = D_{RTL} =$ _____ pcph $M_{134}' = \frac{D_R + D_T + D_L}{(D_R/M_1') + (D_T/M_3') + (D_L/M_4')}$ $M_{134}' =$ _____ pcph $M_{134}' - D_{RTL} =$ _____ pcph _____ ☐

erall Evaluation * Signalization of intersections on Roosevelt Str + Columbus Ave and at Stuart St raises Level of Service from "E" to "D". Acceptable scenario for 541-space garage implicit under the AM peak

Unsignalized Intersection Capacity Calculation Form

Intersection: Dartmouth / Nat'l Garage / Tent City Garage

Location Plan:



Counts:
Date: 1989 - Build
Day: Weekday
Time: PM Peak
Control: Stop on C, D
Prevailing Speed: 30

Hourly Demand Traffic Volumes from ____ to ____, ____ m

Approach	A			B			C			D		
Movement	A_L ↙	A_T →	A_R ↘	B_L ↘	B_T ←	B_R ↙	C_L ↘	C_T ↑	C_R ↙	D_L ↙	D_T ↑	D_R ↙
Volume	18	384	81	54	367	12	176	0	118	106	0	159
pch (see Table 1)	18	[redacted]		54	[redacted]		176	0	118	106	0	159

		C_R ↘	D_R ↙
Step 1	**Right Turn from C/D**		
	Conflicting Flows = M_H = (from Fig. 1)	½ A_R + A_T = 40 + 384 = 424 pcph	½ B_R + B_T = 6 + 367 = 373 pcph
	Critical Gap from Table 2 T_g =	5.5 sec	5.5 sec
	Capacity from Fig. 2 =	$M_{No} = M_1$ = 680 pcph	$M'_{No} = M'_1$ = 740 pcph
	Demand =	C_R = 118 pcph	D_R = 159 pcph
	Capacity Used =	100 (C_R/M_1) = 17 %	100 (D_R/M'_1) = 21 %
	Impedance Factor from Fig. 3 =	P_1 = 0.80	P'_1 = 0.85
____	Shared Lane – See Step 3		
✓	No Shared Lane – Available Reserve	$M_1 - C_R$ = 562 pcph	$M'_1 - D_R$ = ____ pcph
	Delay & Level of Service (Table 3)	No Delay A	____

		B_L ↙	A_L ↙
Step 2	**Left Turn from B/A**		
	Conflicting Flows = M_H = (from Fig. 1)	A_R + A_T = 81 + 384 = 465 pcph	B_R + B_T = 12 + 367 = 379 pcph
	Critical Gap from Table 2 T_g =	5.0 sec	5.0 sec
	Capacity from Fig. 2 =	$M_{No} = M_2$ = 750 pcph	$M'_{No} = M'_2$ = 815 pcph
	Demand =	B_L = 54 pcph	A_L = 15 pcph
	Capacity Used =	100 (B_L/M_2) = 7 %	100 (A_L/M'_2) = 2 %
	Impedance Factor from Fig. 3 =	P_2 = 0.95	P'_2 = 0.97
	Available Reserve =	$M_2 - B_L$ = 691 pcph	$M'_2 - A_L$ = 792 pcph
	Delay & Level of Service (Table 3)	No Delay A	No Delay A

		C_T ↑	D_T ↑
Step 3	**Thru Movement from C/D**		
	Conflicting Flows = M_H = (from Fig. 1)	½A_R + A_T + A_L + B_L + B_T + B_R 41 + 384 + 15 + 54 + 367 + 12	½B_R + B_T + B_L + A_L + A_T + A_R 6 + 367 + 54 + 15 + 384 + 81
	(M_T & M'_T are used in Step 4)	$M_H = M_T$ = 876 pcph	$M_H = M'_T$ = 910 pcph
	Critical Gap from Table 2 T_g =	6.0 sec	6.0 sec
	Capacity from Fig. 2 =	M_{No} = 325 pcph	M'_{No} = 325 pcph
	Adjust for Impedance	$M_{No} \times P_2 \times P'_2 = M_3$ = 306 pcph	$M'_{No} \times P'_2 \times P_2 = M'_3$ = 297 pcph
	Demand =	C_T = 0 pcph	D_T = 0 pcph
	Capacity Used =	100 (C_T/M_3) = 0 %	100 (D_T/M'_3) = 0 %
	Impedance Factor from Fig. 3	P_3 = 1.0	P'_3 = 1.0

Unsignalized Intersection Capacity Calculation Form (continued)

93rd Ave PM Peak 5th Ave Traffic 40th Ave

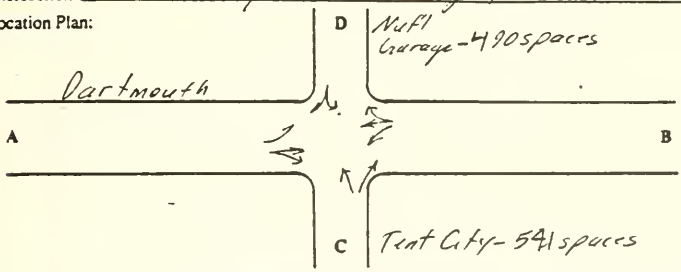
Step 3 (Continued)	C_T ↑	D_T ↑
No Shared Lane Available Reserve = Delay & Level of Service (Table 3)	$M_3 - C_T =$ _____ pcph _____	$M'_3 - D_T =$ _____ pcph _____
Shared Lane with Left Turn See Step 4		
Shared Lane Demand = Shared Lane with Right Turn Capacity of Shared Lane = Available Reserve = Delay & Level of Service (Table 3)	$C_R + C_T = C_{RT} =$ _____ pcph $M_{13} = \frac{(C_R + C_T)}{(C_R/M_1) + (C_T/M_3)}$ $M_{13} =$ _____ pcph $M_{13} - C_{RT} =$ _____ pcph _____	$D_R + D_T = D_{RT} =$ _____ pcph $M'_{13} = \frac{(D_R + D_T)}{(D_R/M'_1) + (D_T/M'_3)}$ $M'_{13} =$ _____ pcph $M'_{13} - D_{RT} =$ _____ pcph _____
Step 4 **Left Turn from C/D**	C_L ↰	D_L ↱
Conflicting Flows = M_N = (M_T & M'_T were calculated in Step 3) Critical Gap from Table 2 T_g = Capacity from Fig. 2 = Adjust for Impedance	$M_T + D_T + D_R =$ 876 + 0 + 159 = 1035 vph 6.5 sec $M_{No} =$ 215 pcph $M_{No} \times P_3 \times P'_3 \times P'_1 \times P'_3 = M_4$ $M_4 =$ 172 pcph	$M'_T + C_T + C_R =$ 910 + 0 + 118 = 1028 vph 6.5 sec $M'_{No} =$ 215 pcph $M'_{No} \times P'_3 \times P_3 \times P_1 \times P_3 = M'_4$ $M'_4 =$ 176 pcph
✓ No Shared Lane Demand = Available Reserve = Delay & Level of Service (Table 3)	$C_L =$ 176 pcph $M_4 - C_L =$ -4 pcph Very Long Delay E-F*	$D_L =$ 156 pcph $M'_4 - D_L =$ 72 pcph Very Long Delay E*
Shared Lane Demand = Shared Lane with Thru Capacity of Shared Lane = Available Reserve = Delay & Level of Service (Table 3)	$C_T + C_L = C_{TL} =$ _____ pcph $M_{34} = \frac{(C_T + C_L)}{(C_T/M_3) + (C_L/M_4)}$ $M_{34} =$ _____ pcph $M_{34} - C_{TL} =$ _____ pcph _____	$D_T + D_L = D_{TL} =$ _____ pcph $M'_{34} = \frac{D_T + D_L}{(D_T/M'_3) + (D_L/M'_4)}$ $M'_{34} =$ _____ pcph $M'_{34} - D_{TL} =$ _____ pcph _____
Shared Lane Demand = Shared Lane with Thru & Right Capacity of Shared Lane = Available Reserve = Delay & Level of Service (Table 3)	$C_R + C_T + C_L = C_{RTL} =$ _____ pcph $M_{134} = \frac{C_R + C_T + C_L}{(C_R/M_1) + (C_T/M_3) + (C_L/M_4)}$ $M_{134} =$ _____ pcph $M_{134} - C_{RTL} =$ _____ pcph _____	$D_R + D_T + D_L = D_{RTL} =$ _____ pcph $M'_{134} = \frac{D_R + D_T + D_L}{(D_R/M'_1) + (D_T/M'_3) + (D_L/M'_4)}$ $M'_{134} =$ _____ pcph $M'_{134} - D_{RTL} =$ _____ pcph _____

Overall Evaluation * Signalization of intersections on Dartmouth & at Columbus Ave and at Steer-St raises Level of Service "E-F" to "D-E". Marginal requirement for Signalization

Unsignalized Intersection Capacity Calculation Form

Intersection: Dartmouth / Nat'l Garage / Tent City Garage

Location Plan:



Counts:
Date: 1989 - Build
Day: Weekday
Time: PM Peak
Control: Stop on C, D
Prevailing Speed: 30

Hourly Demand Traffic Volumes from ____ to ____. ____ m

Approach	A ←			B →			C ↘			D ↗		
Movement	A_L ↙	A_T →	A_R ↖	B_L ↖	B_T ←	B_R ↙	C_L ↖	C_T ↑	C_R ↗	D_L ↘	D_T ↑	D_R ↙
Volume	18	384	53	35	367	12	147	0	99	106	0	159
pch (see Table 1)	18			35			147	0	99	106	0	159

Step 1 — Right Turn from C/D

	C_R ↖	D_R ↙
Conflicting Flows = M_H (from Fig. 1)	½ A_R + A_T = 27 + 384 = 411 pcph	½ B_R + B_T = 6 + 367 = 373 pcph
Critical Gap from Table 2 T_g	5.5 sec	5.5 sec
Capacity from Fig. 2	$M_{No} = M_1$ = 690 pcph	$M'_{No} = M'_1$ = 715 pcph
Demand	C_R = 99 pcph	D_R = 159 pcph
Capacity Used	100 (C_R/M_1) = 14 %	100 (D_R/M'_1) = 22 %
Impedance Factor from Fig. 3	P_1 = 0.90	P'_1 = 0.84
___ Shared Lane – See Step 3		
✓ No Shared Lane – Available Reserve	$M_1 - C_R$ = 591 pcph	$M'_1 - D_R$ = 556 pcph
Delay & Level of Service (Table 3)	No Delay A	No Delay A

Step 2 — Left Turn from B/A

	B_L ↖	A_L ↙
Conflicting Flows = M_H (from Fig. 1)	A_R + A_T = 53 + 384 = 437 pcph	B_R + B_T = 12 + 367 = 379 pcph
Critical Gap from Table 2 T_g	5.0 sec	5.0 sec
Capacity from Fig. 2	$M_{No} = M_2$ = 760 pcph	$M'_{No} = M'_2$ = 810 pcph
Demand	B_L = 35 pcph	A_L = 18 pcph
Capacity Used	100 (B_L/M_2) = 5 %	100 (A_L/M'_2) = 2 %
Impedance Factor from Fig. 3	P_2 = 0.97	P'_2 = 0.99
Available Reserve	$M_2 - B_L$ = 725 pcph	$M'_2 - A_L$ = 792 pcph
Delay & Level of Service (Table 3)	No Delay A	No Delay A

Step 3 — Thru Movement from C/D

	C_T ↑	D_T ↑
Conflicting Flows = M_H (from Fig. 1) (M_T & M'_T are used in Step 4)	½A_R + A_T + A_L + B_L + B_T + B_R 27 + 384 + 18 + 35 + 367 + 12	½B_R + B_T + B_L + A_L + A_T + A_R 6 + 367 + 35 + 18 + 384 + 53
	$M_H = M_T$ = 843 pcph	$M_H = M'_T$ = 863 pcph
Critical Gap from Table 2 T_g	6.0 sec	6.0 sec
Capacity from Fig. 2	M_{No} = — pcph	M'_{No} = — pcph
Adjust for Impedance	$M_{No} \times P_2 \times P'_2 = M_3$ = — pcph	$M'_{No} \times P'_2 \times P_2 = M'_3$ = — pcph
Demand	C_T = 0 pcph	D_T = 0 pcph
Capacity Used	100 (C_T/M_3) = 0 %	100 (D_T/M'_3) = 0 %
Impedance Factor from Fig. 3	P_3 = 1.0	P'_3 = 1.0

1939 E.B. Id PM Peak 541 veh/hr, 490 veh/hr

Step 3 (Continued)	C_T ↑	D_T ↑
___ No Shared Lane		
Available Reserve =	$M_3 - C_T =$ _____ pcph	$M'_3 - D_T =$ _____ pcph
Delay & Level of Service (Table 3)	_____ ☐	_____ ☐
___ Shared Lane with Left Turn		
See Step 4		
Shared Lane Demand =	$C_R + C_T = C_{RT} =$ _____ pcph	$D_R + D_T = D_{RT} =$ _____ pcph
___ Shared Lane with Right Turn	$M_{13} = \frac{(C_R + C_T)}{(C_R/M_1) + (C_T/M_3)}$	$M'_{13} = \frac{(D_R + D_T)}{(D_R/M'_1) + (D_T/M'_3)}$
Capacity of Shared Lane =	$M_{13} =$ _____ pcph	$M'_{13} =$ _____ pcph
Available Reserve =	$M_{13} - C_{RT} =$ _____ pcph	$M'_{13} - D_{RT} =$ _____ pcph
Delay & Level of Service (Table 3)	_____ ☐	_____ ☐
Step 4 Left Turn from C/D	C_L ↰	D_L ↰
Conflicting Flows = M_H =	$M_T + D_T + D_R =$	$M'_T + C_T + C_R =$
(M_T & M'_T were calculated in Step 3)	843 + 0 + 159 = 1002 cph	863 + 0 + 99 = 962 cph
Critical Gap from Table 2 T_g =	6.5 sec	6.5 sec
Capacity from Fig. 2 =	$M_{No} =$ 225 pcph	$M'_{No} =$ 240 pcph
Adjust for Impedance	$M_{No} \times P_2 \times P'_2 \times P'_1 \times P'_3 = M_4$	$M'_{No} \times P'_2 \times P_2 \times P_1 \times P_3 = M'_4$
	$M_4 =$ 181 pcph	$M'_4 =$ 207 pcph
✓ No Shared Lane Demand =	$C_L =$ 147 pcph	$D_L =$ 106 pcph
Available Reserve =	$M_4 - C_L =$ 34 pcph	$M'_4 - D_L =$ 101 pcph
Delay & Level of Service (Table 3)	Very Long Delay E *	Long Delay D *
Shared Lane Demand =	$C_T + C_L = C_{TL} =$ _____ pcph	$D_T + D_L = D_{TL} =$ _____ pcph
___ Shared Lane with Thru	$M_{34} = \frac{(C_T + C_L)}{(C_T/M_3) + (C_L/M_4)}$	$M'_{34} = \frac{D_T + D_L}{(D_T/M'_3) + (D_L/M'_4)}$
Capacity of Shared Lane =	$M_{34} =$ _____ pcph	$M'_{34} =$ _____ pcph
Available Reserve =	$M_{34} - C_{TL} =$ _____ pcph	$M'_{34} - D_{TL} =$ _____ pcph
Delay & Level of Service (Table 3)	_____ ☐	_____ ☐
Shared Lane Demand =	$C_R + C_T + C_L = C_{RTL} =$ _____ pcph	$D_R + D_T + D_L = D_{RTL} =$ _____ pcph
___ Shared Lane with Thru & Right		
Capacity of Shared Lane =	$M_{134} = \frac{C_R + C_T + C_L}{(C_R/M_1) + (C_T/M_3) + (C_L/M_4)}$	$M'_{134} = \frac{D_R + D_T + D_L}{(D_R/M'_1) + (D_T/M'_3) + (D_L/M'_4)}$
	$M_{134} =$ _____ pcph	$M'_{134} =$ _____ pcph
Available Reserve =	$M_{134} - C_{RTL} =$ _____ pcph	$M'_{134} - D_{RTL} =$ _____ pcph
Delay & Level of Service (Table 3)	_____ ☐	_____ ☐

Overall Evaluation * Signalization of intersections on Dartmouth St. at Columbus Ave. and at Stuart St. raises Level of Service "E" to "D".

41. Appendix 6: Air Quality, Table 1, add,

    Note: The National Ambient Air Quality Standard for non-methene Hydrocarbons (NMHC) was revoked by the Environmental Protection Agency on December 29, 1982 (48 Federal Register 628, January 5, 1983).

42. Appendix 6: Air Quality, Figure 1,

    Although the receptors appear to be in the middle of buildings they are arbitrarily placed 10 meters perpendicular to the most congested intersection approach or the intersection approach which resulted in the highest carbon monoxide concentration. The Massachusetts Department of Environmental Quality Engineering concurred with this methodology.

43. Appendix 6: Air Quality, page 7, replace the first equation with,

$$X = 870\ (Q + (Xb)(F))/F$$

44. Appendix 7; Noise, page 4, in paragraph 7, change heavy duty vehicle percentage to 3.

45. Appendix 7: Noise, page 6, replace with the following,

III. RESULTS AND DISCUSSION

The noise worksheets for the analysis are presented in Attachment 2.0. The results of the analysis are presented in Table 2. The following is a synopsis of the results by receptor.

- Daily noise contributions from aircraft at Logan Airport are 58 decibels at receptor 1, which level is acceptable for residential use. The at-grade rail lines located 720 feet north of the site are presently used by Amtrak and the Boston and Maine Railroad. Due to the distance, intervening barriers, and brevity of the noise peak from this source, the noise contribution is insignificant (40 dB). Traffic in the vicinity of the site has the most influence on ambient noise levels. Truck traffic and freeflow-automobile traffic primarily on Dartmouth Street and Columbus Avenue result in noise levels of 74 dB for 1984 existing conditions. Increased traffic volumes by 1988 will result in a slight increase in noise: 75 dB under Build and No-Build conditions. Although the opening of the Orange Line will increase the number of trains from 24 to 109 a day by 1988, the resultant noise level at 54 decibels will have an imperceptible effect on Tent City noise levels.

- Receptor 2 is located on the northeast corner of Columbus Avenue and Dartmouth Street. Noise levels are the same as receptor 1 for all conditions.

- Receptor 3 is located on the southwest corner of Stuart Street and Dartmouth Street. Aircraft and trains have a negligible effect on the noise levels at this receptor. Traffic on adjacent streets results in normally unacceptable noise levels for 1984, and unacceptable noise for 1988 Build and No-Build conditions.

- Receptor 4 located on the southeast corner of Stuart Street and Dartmouth Street are exposed to the same noise levels as Receptor 3. The noise levels are 73 dB for 1984 existing conditions and 76 dB under 1988 No-Build and Build conditions.

The results of the analysis indicate that portions of the Tent City site along Dartmouth Street and Columbus Avenue will be exposed to marginally unacceptable traffic noise. Approximately 75% of the residential units in the project will be protected by adjacent buildings from high traffic volumes on Dartmouth Street, Stuart Street, and Columbus Avenue. This will result in a noise drop of at least 10 decibels for these units.

46. Appendix 7: Noise Appendix, Table 2 replace with the following,

TABLE 2
DESIGN NOISE LEVELS

Decibels (dB)

NOISE RECEPTOR	LOCATION	1984 EXISTING	1988 NO-BUILD	1988 BUILD
1	Tent City residence on northwest corner of Dartmouth St. and Columbus Ave.	74	75	75
2	Building on northeast corner of Dartmouth St. and Columbus Ave.	74	75	75
3	Sidewalk on southwest corner of Dartmouth St. and Stuart St.	73	76	76
4	Sidewallk on southeast corner of Dartmouth St. and Stuart St.	73	76	76

47. Appendix 7: Noise Appendix, Attachment 2.0 replace pages, 1, 3, 4, 7, 8, 9, 12, 13, 14, 15, 17, 18, 21, 22, 23, 26, 27, and 28 with the following,

EPIAS 1+2

Worksheet A
Site Evaluation

Noise Assessment Guidelines

NORTH EAST
WEST SIDE OF COLUMBUS AVE + DARTMOUTH ST

Site Location

1994 EXISTING

Program

TENT CITY

Project Name

BOSTON MA

Locality

Site Number

Sponsor's Name

Phone

Street Address

City, State

	Acceptability Category	DNL	Predicted for Operations in Year
Roadway Noise	NORMALLY Unacceptable	74	1994
Aircraft Noise	Acceptable	58	1992
Railway Noise	Acceptable	70	1994

Value of DNL for all noise sources: (see page 3 for combination procedure) — 74

Final Site Evaluation (circle one)

Acceptable

(Normally Unacceptable)

Unacceptable

Signature

Date 5/3/85
revised
7/9/85

Attach this worksheet to the top of a package containing Worksheets B-E and Workcharts 1-7 that are used in the site evaluations

Worksheet C
Roadway Noise

Page 1

Noise Assessment Guidelines

1984 EXISTING

List all major roads within 1000 ft of the site:

1. DANIELS PARKWAY
2. DARLINGTON STREET
3. HARELSON STREET
4. STUART STREET

Necessary Information	Road 1	Road 2	Road 3	Road 4
Distance in feet from the NAL to the edge of the road				
a. nearest lane	28	26	984	1768
b. farthest lane	72	56	1004	1818
c. average (effective distance)	60	41	994	1793
Distance to stop sign	0	0	0	0
Road gradient in percent	0	0	0	0
Average speed in mph				
a. Automobiles	30	30	30	30
b. heavy trucks - uphill	—	—	—	—
c. heavy trucks - downhill	—	—	—	—
24 hour average number of automobiles and medium trucks in both directions (ADT)				
a. automobiles	16100	11776	10038	16376
b. medium trucks	875	640	545	890
c. effective ADT (a + (10xb))	24850	18176	15478	25276
24 hour average number of heavy trucks				
a. uphill	—	—	—	—
b. downhill	—	—	—	—
c. total	525	384	327	534
Fraction of nighttime traffic (10:00 p.m. to 7: a.m.)	.2			
Traffic projected for what year?	1994			

ADT = 87%
* MT - 5%
* 3%
* (Richard Walters personal communication, 7/8/85)

NOISE ANALYSIS #2

Worksheet C
Roadway Noise

Noise Assessment Guidelines

1984 EXISTING

Adjustments for Automobile Traffic

	9 Stop and-go Table 3	10 Average Speed Table 4	11 Night-Time Table 5	12 Auto ADT (line 5c)	13 Adjusted Auto ADT	14 DNL (Workchart 1)	15 Barrier Attenuation	16 Partial DNL
Road No. 1	—	x .30	x 1.00	x 24850	= 7455	66	- —	= 66
Road No. 2	—	x .30	x 1.00	x 18176	= 5453	67	- —	= 67
Road No. 3	—	x .30	x 1.00	x 15478	= 4643	45	- —	= 45
Road No. 4	—	x .30	x 1.00	x 25276	= 7582	42	- —	= 42

Adjustments for Heavy Truck Traffic

	17 Gradient Table 6	18 Average Speed Table 7	19 Truck ADT / 2	20	21	22 Stop and-go Table 8	23 Night-Time Table 5	24 Adjusted Truck ADT	25 DNL (Work chart 2)	26 Barrier Attn.	27 Partial DNL
Uphill											
Road No. 1				Add .81 x		—	x 1.00	= 425	69	- —	= 69
Downhill											
Uphill											
Road No. 2				Add .81	x	—	x 1.00	= 311	69	- —	= -7
Downhill											
Uphill											
Road No. 3				Add .81	x	—	x 1.00	= 265	45	- —	= 45
Downhill											
Uphill											
Road No. 4				Add .81	x	—	x 1.00	= 432	45	- —	= 45
Downhill											

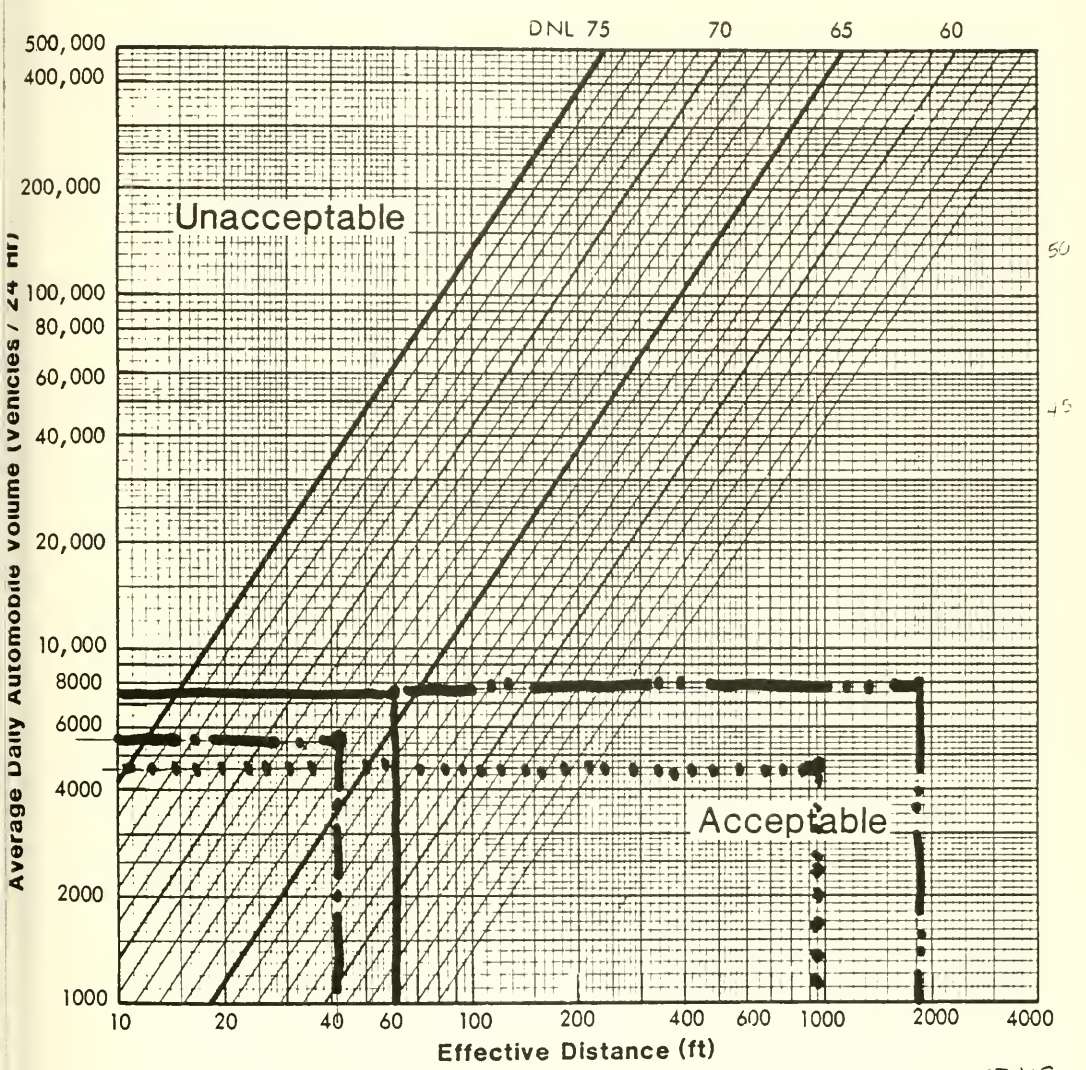
Combined Automobile & Heavy Truck DNL

Road No. 1 71 Road No. 2 71 Road No. 3 48 Road No. 4 47 Total DNL for All Roads 74

Signature [signature] Date 5/3/85

revised 7/9/85

Workchart 1
Autos (55 mph)



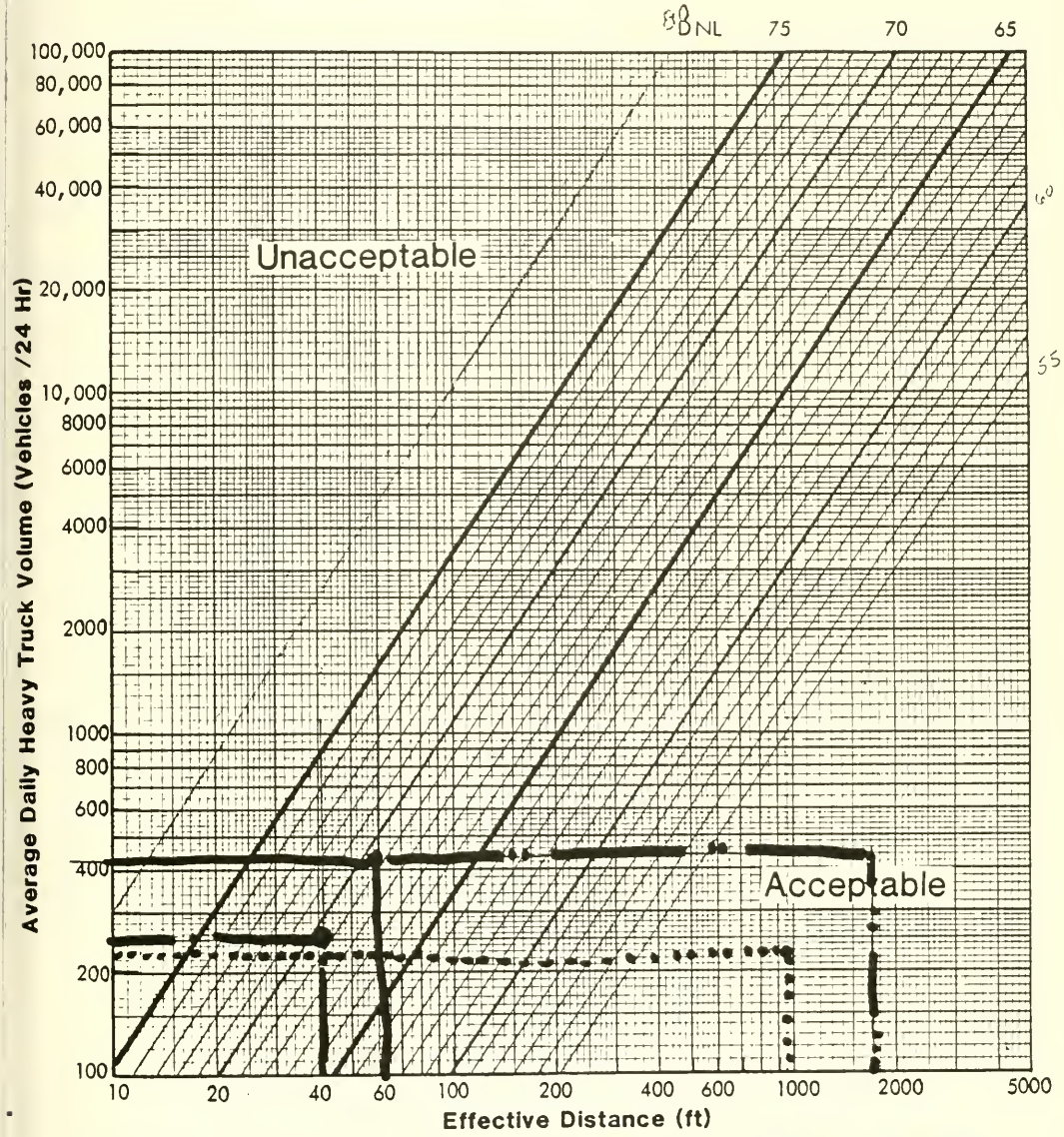
50

45

1984 EXISTING
RECEPTORS 1+2

Road 1 ——
Road 2 —·—·—
Road 3 ·····
Road 4 —··—··—

Workchart 2
Heavy Trucks (55 mph)



Road 1 ——
Road 2 —·—
Road 3 ····
Road 4 ——··——

1984 EXISTING
1 + 2

NOISE RECEPTORS 1+2

Worksheet A
Site Evaluation 1988 NO BUILD

Noise Assessment Guidelines

NW/NE corner of Col Ave + Dart St.
Site Location

1988 NO BUILD
Program

TENT CITY
Project Name

BOSTON MA
Locality

File Number

Sponsor's Name | Phone

Street Address | City, State

	Acceptability Category	DNL	Predicted for Operations in Year
1. Roadway Noise	NORMALLY UNACCEPTABLE	75	1988
2. Aircraft Noise	Acceptable	56	1982 (see page 2)
3. Railway Noise	ACCEPTABLE	48	1988

Value of DNL for all noise sources: (see page 3 for combination procedure) 75

Final Site Evaluation (circle one)

Acceptable

(Normally Unacceptable)

Unacceptable

Signature Rebecca Tingley Date 5/3/85
revised 7/9/85

Clip this worksheet to the top of a package containing Worksheets B-E and Workcharts 1-7 that are used in the site evaluations

Worksheet C
Roadway Noise

19-0 [illegible]

List all major roads within 1000 ft of the site:

1. SAME AS 1984 EXISTING (see page 3)
2.
3.
4.

Necessary Information	Road 1	Road 2	Road 3	Road 4
1. Distance in feet from the NAL to the edge of the road				
a. nearest lane				
b. farthest lane				
c. average (effective distance)				
2. Distance to stop sign				
3. Road gradient in percent				
4. Average speed in mph				
a. Automobiles				
b. heavy trucks - uphill				
c. heavy trucks - downhill				
5. 24 hour average number of automobiles and medium trucks in both directions (ADT)				
a. automobiles	18503	16460	18045	17732
b. medium trucks	1006	845	951	914
c. effective ADT (a + (10xb))	28563	25410	27855	27372
6. 24 hour average number of heavy trucks				
a. uphill	—	—	—	—
b. downhill	—	—	—	—
c. total	603	537	588	578
7. Fraction of nighttime traffic (10:00 p.m. to 7 a.m.)				
8. Traffic projected for what year?	1988	1988	1988	1988

1180 Noise.2

Adjustments for Automobile Traffic

	9 Stop and-go Table 3	10 Average Speed Table 4	11 Night-Time Table 5	12 Auto ADT (line 5c)	13 Adjusted Auto ADT	14 DNL (Workchart 1)	15 Barrier Attenuation	16 Partial DNL
Road No. 1	—	x .3	x 1.00	x 28563	= 8569	66	- —	= 66
Road No. 2	—	x .3	x 1.00	x 25410	= 7623	68	- —	= 68
Road No. 3	—	x .3	x 1.00	x 27855	= 8356	47	- —	= 47
Road No. 4	—	x .3	x 1.00	x 27372	= 8212	44	- —	= 44

Adjustments for Heavy Truck Traffic

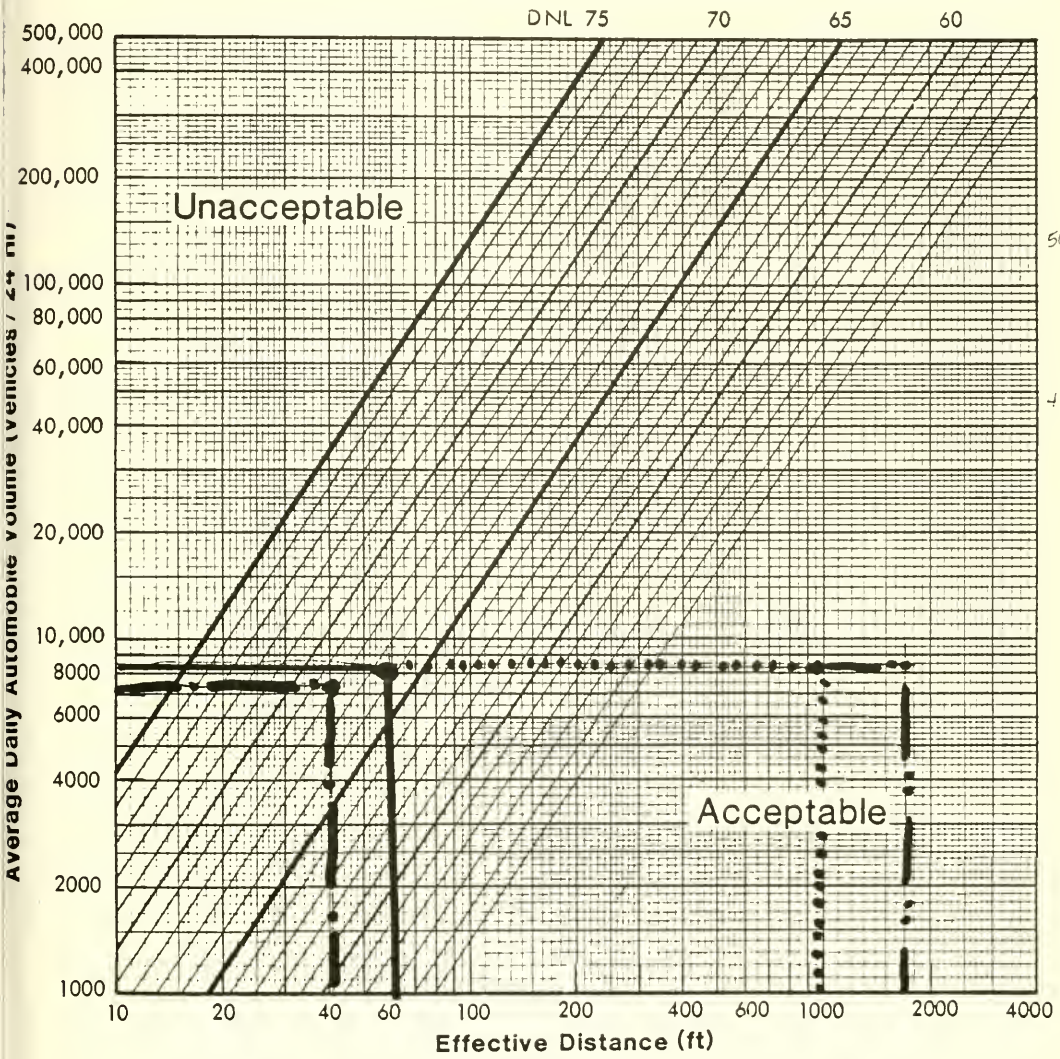
	17 Gradient Table 6	18 Average Speed Table 7	19 Truck ADT / 2	20	21	22 Stop and-go Table 8	23 Night-Time Table 5	24 Adjusted Truck ADT	25 DNL (Work chart 2)	26 Barrier Attn.	27 Partial DNL
Uphill	___	x ___	x ___	= ___							
Road No. 1					Add .81	x —	x 1.00	= 433	70	- —	= 70
Downhill	___	x ___	= ___								
Uphill	___	x ___	x ___	= ___							
Road No. 2					Add .81	x —	x 1.00	= 435	72	- —	= 72
Downhill	___	x ___	= ___								
Uphill	___	x ___	x ___	= ___							
Road No. 3					Add .81	x —	x 1.00	= 476	51	- —	= 51
Downhill	___	x ___	= ___								
Uphill	___	x ___	x ___	= ___							
Road No. 4					Add .81	x —	x 1.00	= 468	39	- —	= 39
Downhill	___	x ___	= ___								

Combined Automobile & Heavy Truck DNL

Road No. 1 71 Road No. 2 73 Road No. 3 52 Road No. 4 45 Total DNL for All Roads 75

Signature Erica D'Angelo Date 5/3/85
revised
7/9/85

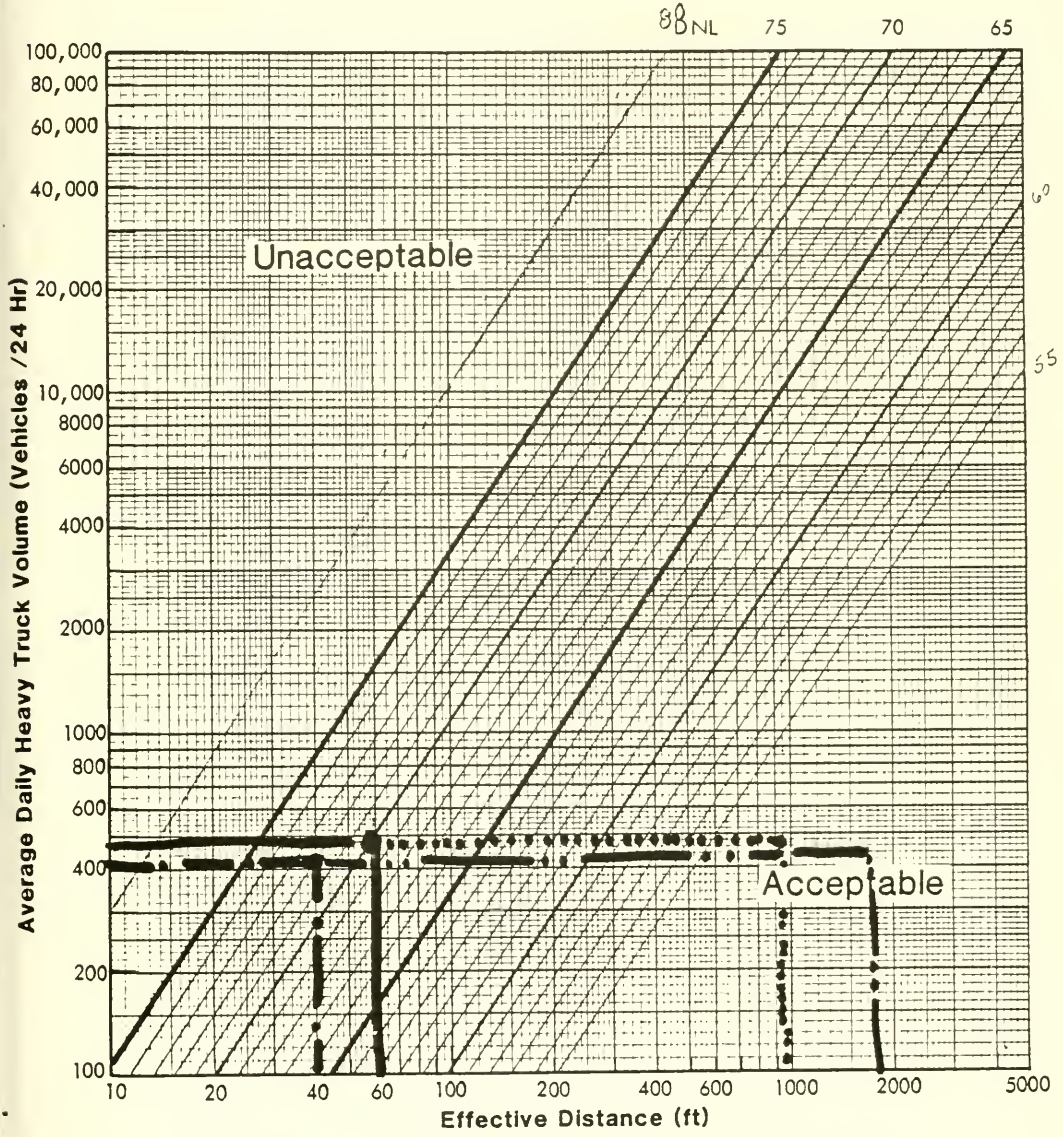
Workchart 1
Autos (55 mph)



Road 1 ——————
Road 2 —— · ——
Road 3 ····· ·
Road 4 —— ·· ——

1988 No Build
1 + 2

Workchart 2
Heavy Trucks (55 mph)



Road 1 ——
Road 2 —·—
Road 3 ·····
Road 4 —··—

1988 No BUILD
1+2

NOISE RECEPTORS 1 + 2

Worksheet A
Site Evaluation 1988 BUILD

Noise Assessment Guidelines

NW + NE EDGE OF COL AVE + DART ST.
Site Location

1988 BUILD
Program

TENT CITY
Project Name

BOSTON MA
Locality

File Number

Sponsor's Name

Phone

Street Address

City, State

	Acceptability Category	DNL	Predicted for Operations in Year
1. Roadway Noise	NORMALLY Unacceptable	75	1988
2. Aircraft Noise	ACCEPTABLE	58	1982 (see page 2)
3. Railway Noise	ACCEPTABLE	40	1984

Value of DNL for all noise sources: (see page 3 for combination procedure) 75

Final Site Evaluation (circle one)

Acceptable

(Normally Unacceptable)

Unacceptable

Signature Rebecca Longley

Date 5/3/85
revised
7/9/85

Clip this worksheet to the top of a package containing Worksheets B-E and Workcharts 1-7 that are used in the site evaluations

NOISE REPORT SITE

Worksheet C
Roadway Noise

1998 2010

List all major roads within 1000 ft of the site:

1. Same as 1984 (see page 3)
2.
3.
4.

Necessary Information	Road 1	Road 2	Road 3	Road 4
1. Distance in feet from the NAL to the edge of the road				
a. nearest lane				
b. farthest lane				
c. average (effective distance)				
2. Distance to stop sign				
3. Road gradient in percent				
4. Average speed in mph				
a. Automobiles				
b. heavy trucks - uphill				
c. heavy trucks - downhill				
5. 24 hour average number of automobiles and medium trucks in both directions (ADT)				
a. automobiles	18709	18432	18225	17730
b. medium trucks	1017	10[illegible]	990	96[illegible]
c. effective ADT (a + (10xb))	28879	28452	28125	27350
6. 24 hour average number of heavy trucks				
a. uphill	—	—	—	—
b. downhill	—	—	—	—
c. total	610	601	594	578
7. Fraction of nighttime traffic (10:00 p.m. to 7: a.m.)				
8. Traffic projected for what year?				

1990 ESAL

Adjustments for Automobile Traffic

	9 Stop and-go Table 3	10 Average Speed Table 4	11 Night-Time Table 5	12 Auto ADT (line 5c)	13 Adjusted Auto ADT	14 DNL (Workchart 1)	15 Barrier Attenuation	16 Partial DNL
Road No. 1	—	.3	1.00	28879	8664	67	—	67
Road No. 2	—	.3	1.00	28452	8536	69	—	69
Road No. 3	—	.3	1.00	28125	8438	47	—	47
Road No. 4	—	.3	1.00	27350	8205	44	—	44

Adjustments for Heavy Truck Traffic

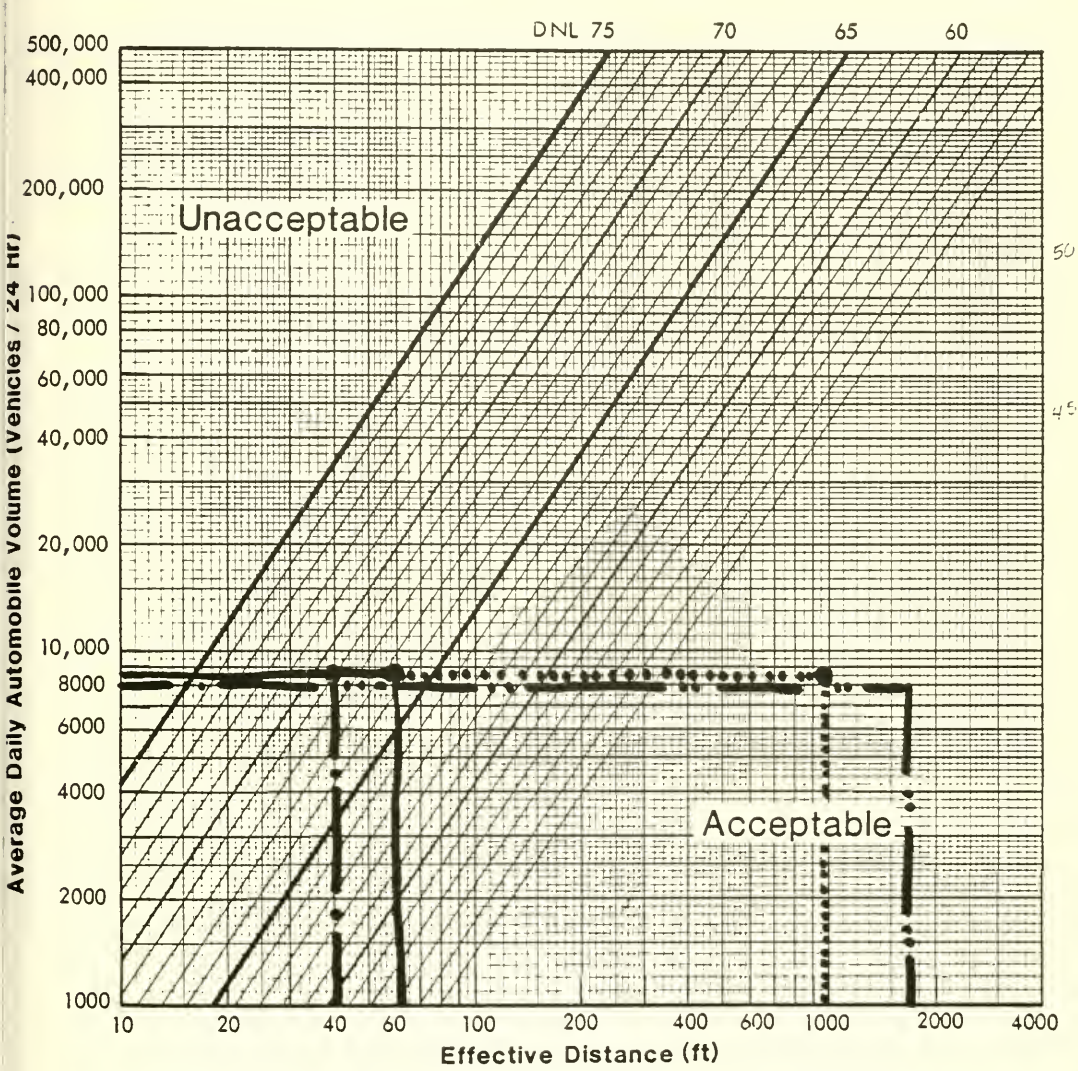
	17 Gradient Table 6	18 Average Speed Table 7	19 Truck ADT / 2	20	21	22 Stop and-go Table 8	23 Night-Time Table 5	24 Adjusted Truck ADT	25 DNL (Work chart 2)	26 Barrier Attn.	27 Partial DNL
Uphill	___	X ___	X ___	= ___							
Road No. 1					Add .81	X —	X 1.00	= 494	70	- —	= 67
Downhill	___	X ___	= ___								
Uphill	___	X ___	X ___	= ___							
Road No. 2					Add .81	X —	X 1.00	= 487	71	- —	= 71
Downhill	___	X ___	= ___								
Uphill	___	X ___	X ___	= ___							
Road No. 3					Add .81	X —	X 1.00	= 481	52	- —	= 52
Downhill	___	X ___	= ___								
Uphill	___	X ___	X ___	= ___							
Road No. 4					Add .81	X —	X 1.00	= 469	39	- —	= 39
Downhill	___	X ___	= ___								

Combined Automobile & Heavy Truck DNL

Road No. 1 71 Road No. 2 73 Road No. 3 53 Road No. 4 45 Total DNL for All Roads 75

Signature Rebecca Longley Date 5/3/95
REVISED
7/9/95

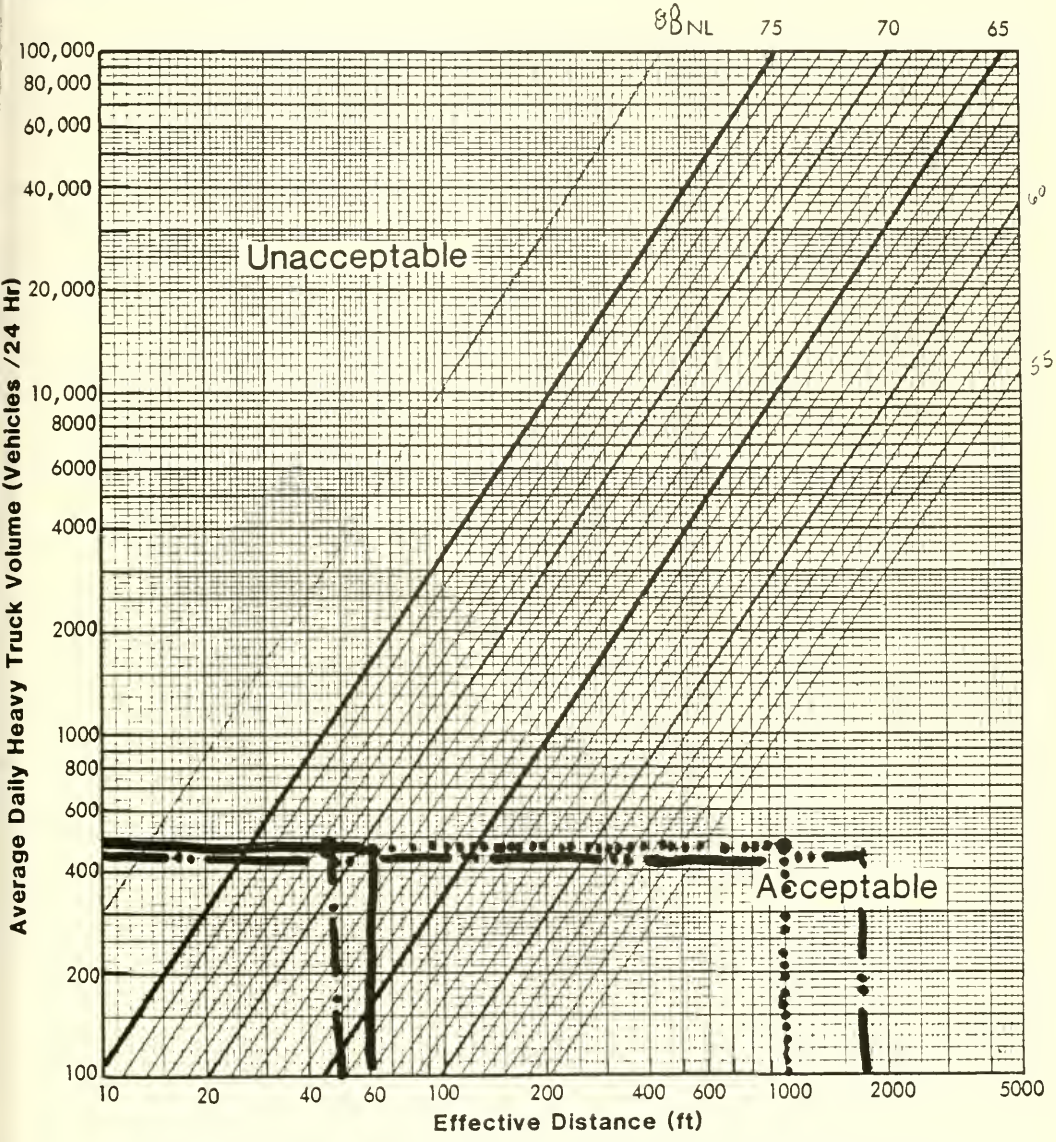
Workchart 1
Autos (55 mph)



ROAD 1 ——————
ROAD 2 —— • ——
ROAD 3 . . . . . .
ROAD 4 —— . . ——

1988 BUILD
1+2

Workchart 2
Heavy Trucks (55 mph)



1988 BUILD
1 + 2

ROAD 1 ——————
ROAD 2 — · —
ROAD 3 ····· ·· ··
ROAD 4 — · · —

NOISE RECEPTORS 3 + 4

Worksheet A
Site Evaluation 1984 EXISTING

Noise Assessment Guidelines

SOUTHWEST + SOUTHEAST EDGE OF DARTMOUTH ST. + STUART ST.
Site Location

1984 EXISTING
Program

TENT CITY
Project Name

BOSTON, MA
Locality

File Number

Sponsor's Name | Phone

Street Address | City, State

	Acceptability Category	DNL	Predicted for Operations in Year
A. Roadway Noise	NORMALLY UNACCEPTABLE	73	1984
B. Aircraft Noise	ACCEPTABLE	59	1984
C. Railway Noise	ACCEPTABLE	54	1984

Value of DNL for all noise sources: (see page 3 for combination procedure) 73

Final Site Evaluation (circle one)

Acceptable

(Normally Unacceptable)

Unacceptable

Signature Rebecca Tingley Date 5/5/85
revised 7/9/85

Clip this worksheet to the top of a package containing Worksheets B-E and Workcharts 1-7 that are used in the site evaluations

NOISE RECEPTORS 3+4

Worksheet C
Roadway Noise

Page 1

Noise Assessment Guidelines

1984 EXISTING

List all major roads within 1000 ft of the site:

1. STUART STREET
2. DARTMOUTH STREET
3. ST. JAMES AVENUE
4. CLARENDON STREET

Necessary Information	Road 1	Road 2	Road 3	Road 4
1. Distance in feet from the NAL to the edge of the road				
a. nearest lane	12	12	436	436
b. farthest lane	72	72	484	484
c. average (effective distance)	42	42	460	460
2. Distance to stop sign	—	—	—	—
3. Road gradient in percent	0	0	0	0
4. Average speed in mph				
a. Automobiles	30	30	30	30
b. heavy trucks - uphill	—	—	—	—
c. heavy trucks - downhill	—	—	—	—
5. 24 hour average number of automobiles and medium trucks in both directions (ADT)				
a. automobiles	16376	10112	12,604	13984
b. medium trucks	890	640	685	760
c. effective ADT (a + (10xb))	25276	16512	19454	21584
6. 24 hour average number of heavy trucks				
a. uphill	—	—	—	—
b. downhill	—	—	—	—
c. total	534	384	411	456
7. Fraction of nighttime traffic (10:00 p.m. to 7: a.m.)	DEFAULT			
8. Traffic projected for what year?	1984			

* worst case

AUTOS = 87%
MT = 5%
HT = 3%
* (Richard Meiers personal communication 7/8/85)

NOISE RECEPTORS 3+4

Worksheet C
Roadway Noise

Noise Assessment Guidelines

1984 EXISTING

Adjustments for Automobile Traffic

	9 Stop and-go Table 3		10 Average Speed Table 4		11 Night-Time Table 5		12 Auto ADT (line 5c)		13 Adjusted Auto ADT		14 DNL (Workchart 1)		15 Barrier Attenuation		16 Partial DNL
Road No. 1	—	x	.3	x	1.00	x	25276	=	5055		65	-	—	=	65
Road No. 2	—	x	.3	x	1.00	x	16512	=	4954		65	-	—	=	65
Road No. 3	—	x	.3	x	1.00	x	19454	=	5836		51	-	—	=	51
Road No. 4	—	x	.3	x	1.00	x	21584	=	6475		52	-	—	=	52

Adjustments for Heavy Truck Traffic

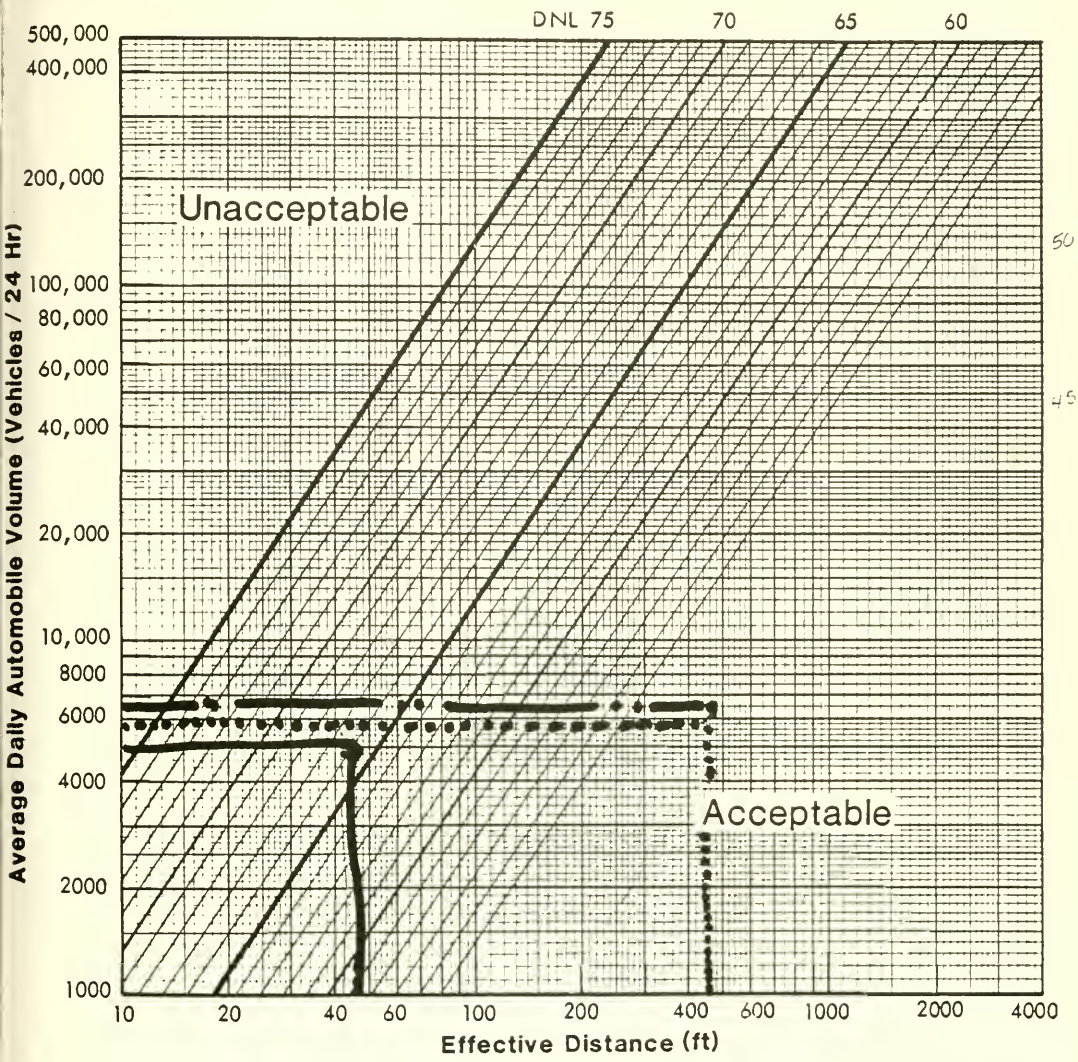
	17 Gradient Table 6		18 Average Speed Table 7		19 Truck ADT / 2		20	21	22 Stop and-go Table 8		23 Night-Time Table 5		24 Adjusted Truck ADT		25 DNL (Work chart 2)		26 Barrier Attn.		27 Partial DNL
Uphill		x		x		=													
Road No. 1								Add .81	x	—	x 1.00	=	432	66	-	—	=		66
Downhill				x		=													
Uphill		x		x		=													
Road No. 2								Add .81	x	—	x 1.00	=	311	67	-	—	=		67
Downhill				x		=													
Uphill		x		x		=													
Road No. 3								Add .81	x	—	x 1.00	=	333	55	-	—	=		55
Downhill				x		=													
Uphill		x		x		=													
Road No. 4								Add .81	x	—	x 1.00	=	369	55	-	—	=		55
Downhill				x		=													

Combined Automobile & Heavy Truck DNL

Road No. 1 70 Road No. 2 69 Road No. 3 56 Road No. 4 57 Total DNL for All Roads 73

Signature Richard Langley Date 7/9/85

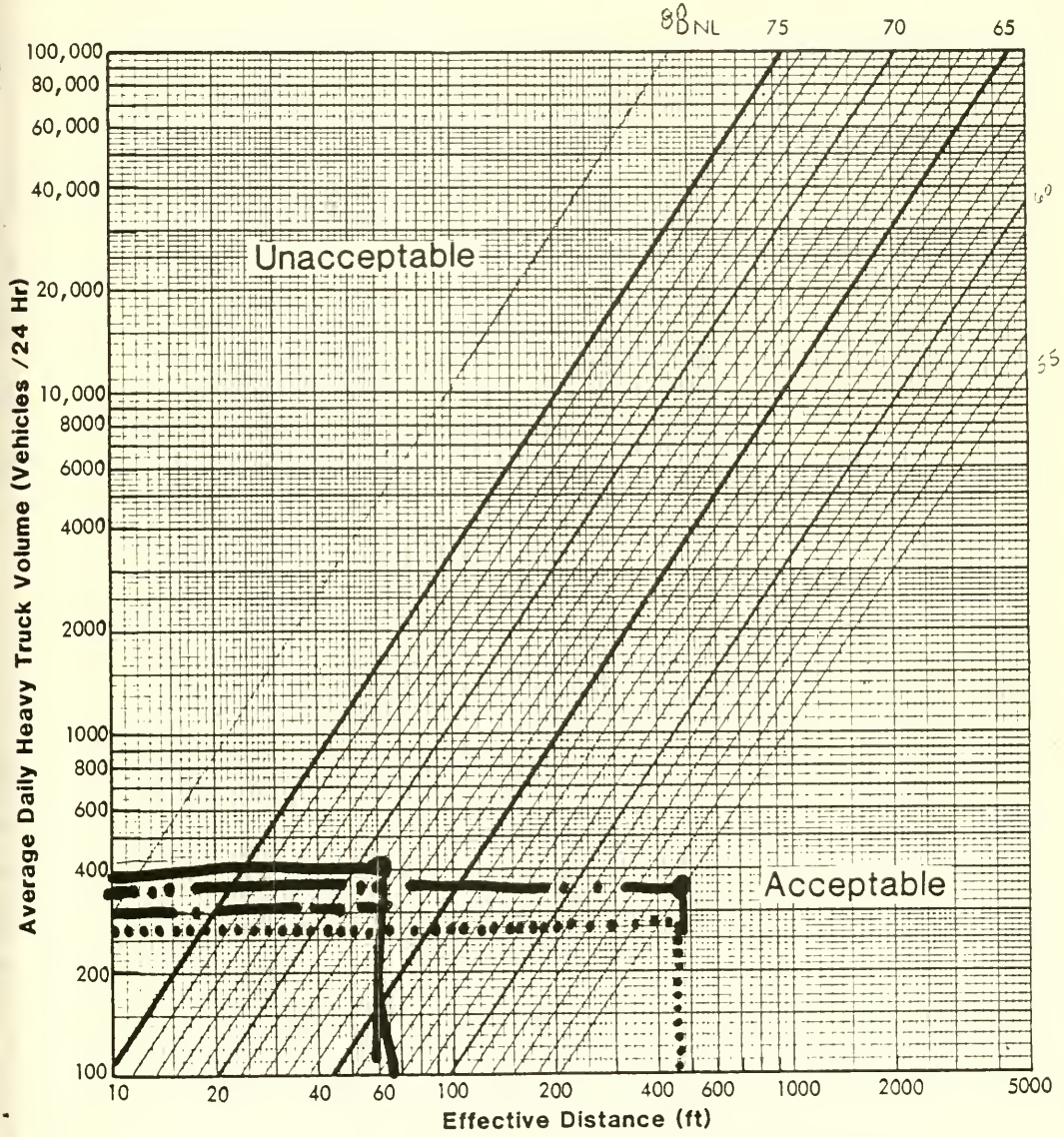
Workchart 1
Autos (55 mph)



ROAD 1 ——
ROAD 2 ——
ROAD 3 ···· ··
ROAD 4 —·—·—

1984 NO BUILD
3+4

Workchart 2
Heavy Trucks (55 mph)



ROAD 1 ——
ROAD 2 —·—
ROAD 3 ·· ·· ·
ROAD 4 —·—

1984 NO BUILD
3+4

NOISE RECEPTORS 3+4

Worksheet A
Site Evaluation

Noise Assessment Guidelines

1988 NO BUILD

"A "X"

1988 NO BUILD

Program

TENT CITY

Project Name

BOSTON MA

Locality

File Number

Sponsor's Name

Phone

Street Address

City, State

	Acceptability Category	DNL	Predicted for Operations in Year	
1. Roadway Noise	NORMALLY UNACCEPTABLE	76	1988	
2. Aircraft Noise	ACCEPTABLE	59	1982	(see page 16)
3. Railway Noise	NOT A FACTOR	58	1988	

Value of DNL for all noise sources: (see page 3 for combination procedure) 76

Final Site Evaluation (circle one)

Acceptable

(Normally Unacceptable)

Unacceptable

Signature Rebecca D'Angley Date 5/5/85

Clip this worksheet to the top of a package containing Worksheets B-E and Workcharts 1-7 that are used in the site evaluations

NOISE RECEPTORS 3+4

Worksheet C
Roadway Noise

Page 1

Noise Assessment Guidelines

1988 NO BUILD

List all major roads within 1000 ft of the site:

1. STUART STREET
2. DARTMOUTH STREET
3. ST. JAMES AVENUE
4. CLARENDON STREET

Necessary Information	Road 1	Road 2	Road 3	Road 4	
1. Distance in feet from the NAL to the edge of the road					
a. nearest lane	12	12	436	436	
b. farthest lane	72	72	484	484	
c. average (effective distance)	42	42	460	460	
2. Distance to stop sign	-	-	-	-	
3. Road gradient in percent	0	0	0	0	
4. Average speed in mph					
a. Automobiles	30	30	30	30	* WORST CASE
b. heavy trucks - uphill	-	-	-	-	
c. heavy trucks - downhill	-	-	-	-	
5. 24 hour average number of automobiles and medium trucks in both directions (ADT)					
a. automobiles	17963	14165	15549	17915	
b. medium trucks	976	770	845	974	AUTOS = 81% MT = 5% HT = 3%
c. effective ADT (a + (10xb))	27723	21865	23999	27656	
6. 24 hour average number of heavy trucks					
a. uphill					
b. downhill					
c. total	566	462	507	524	
7. Fraction of nighttime traffic (10:00 p.m to 7: a.m.)	DEFAULT				
8. Traffic projected for what year?	1988				

RECEPTORS 3 + 4

Worksheet C
Roadway Noise

Noise Assessment Guidelines

1988 NO BUILD

Adjustments for Automobile Traffic

	9 Stop and-go Table 3	10 Average Speed Table 4	11 Night-Time Table 5	12 Auto ADT (line 5c)	13 Adjusted Auto ADT	14 DNL (Workchart 1)	15 Barrier Attenuation	16 Partial DNL
Road No. 1	—	x .30	x 1.00	x 27723	= 8317	67	- —	= 67
Road No. 2	—	x .30	x 1.00	x 21865	= 6560	67	- —	= 67
Road No. 3	—	x .30	x 1.00	x 23999	= 7200	52	- —	= 52
Road No. 4	—	x .30	x 1.00	x 27656	= 8297	52	- —	= 52

Adjustments for Heavy Truck Traffic

	17 Gradient Table 6	18 Average Speed Table 7	19 Truck ADT / 2	20	21	22 Stop and-go Table 8	23 Night-Time Table 5	24 Adjusted Truck ADT	25 DNL (Work chart 2)	26 Barrier Attn.	27 Partial DNL
Uphill	___ x ___ x ___ = ___										
Road No. 1					Add .81	x —	x 1.00	= 475	72	- —	= 72
Downhill		___ x ___ = ___									
Uphill	___ x ___ x ___ = ___										
Road No. 2					Add .81	x —	x 1.00	= 374	71	- —	= 71
Downhill		___ x ___ = ___									
Uphill	___ x ___ x ___ = ___										
Road No. 3					Add .81	x —	x 1.00	= 411	56	- —	= 56
Downhill		___ x ___ = ___									
Uphill	___ x ___ x ___ = ___										
Road No. 4					Add .81	x —	x 1.00	= 473	57	- —	= 57
Downhill		___ x ___ = ___									

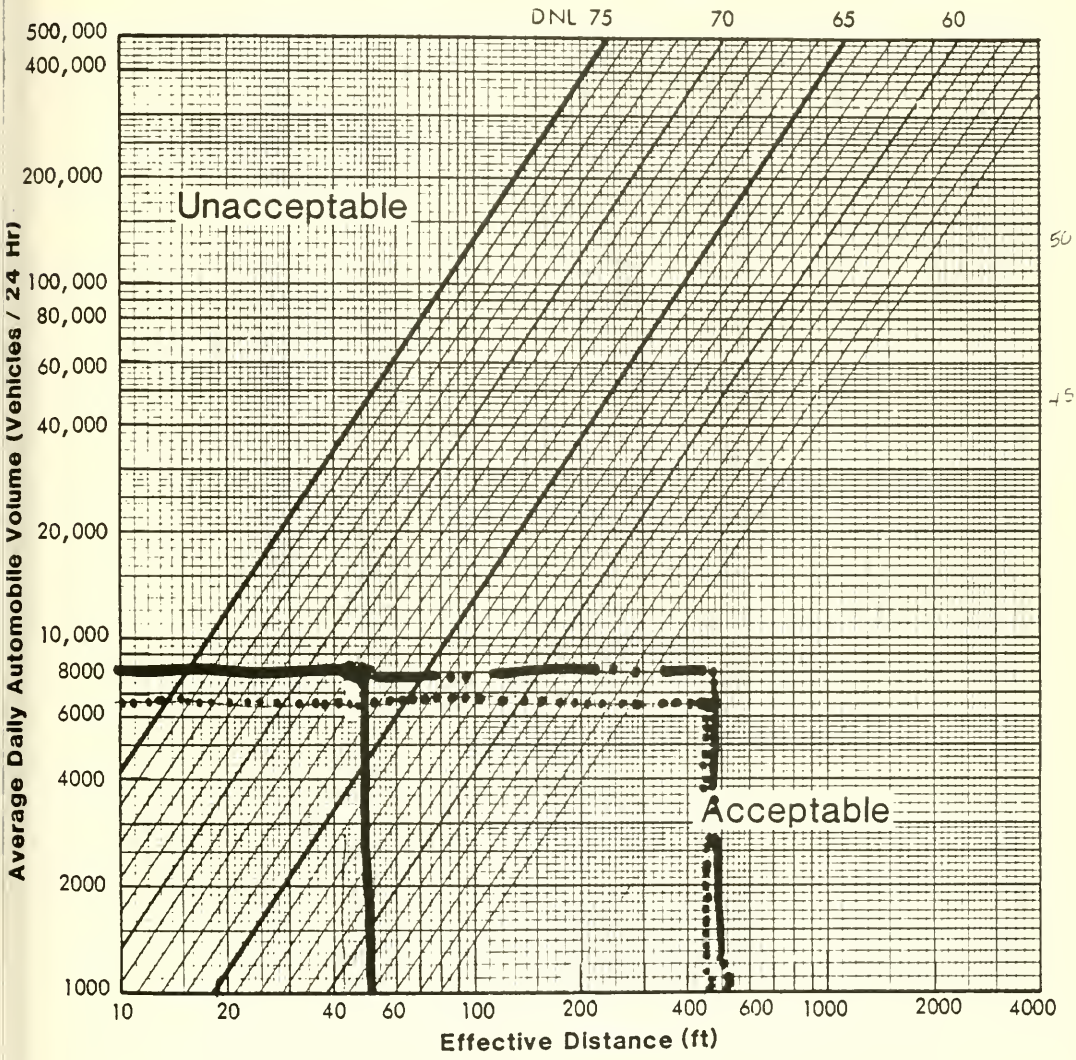
Combined Automobile & Heavy Truck DNL

Road No. 1 73 Road No. 2 72 Road No. 3 57 Road No. 4 58 Total DNL for All Roads 76

Signature [signature] Date 5/[illegible]

revised 7/9/85

Workchart 1
Autos (55 mph)



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45

1988 NO BUILD

3+4

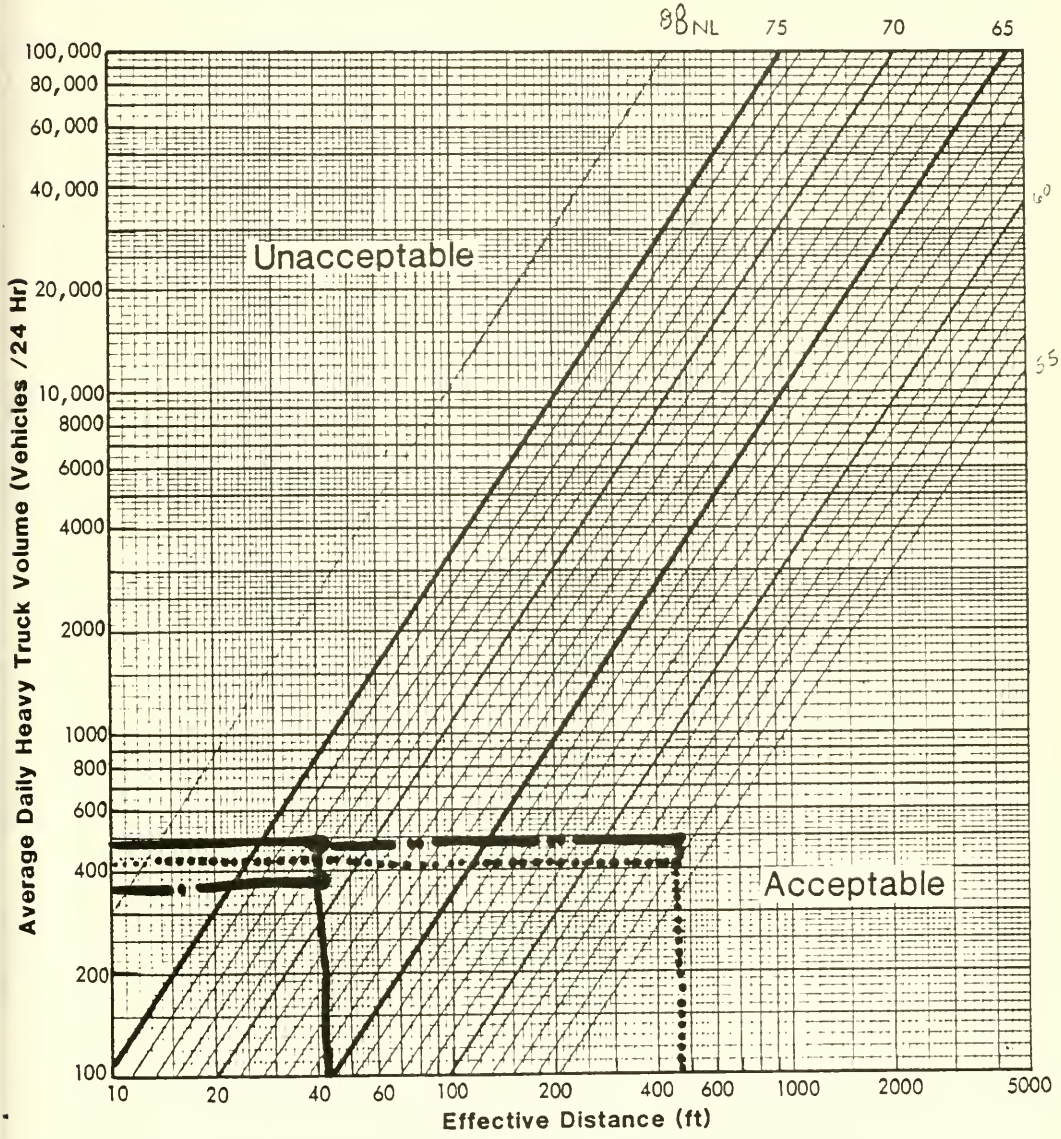
ROAD 1 ——————

ROAD 2 —— ——

ROAD 3 ..... .

ROAD 4 —— .. ——

Workchart 2
Heavy Trucks (55 mph)



ROAD 1 ——————
ROAD 2 —— • ——
ROAD 3 •••••••••••
ROAD 4 —— •• ——

1988 NO BUILD
3+4

NOISE RECEPTORS 3 TY

Worksheet A
Site Evaluation

Noise Assessment Guidelines

1988 BUILD

Site Location

1988 BUILD

Program

TENT CITY

Project Name

BOSTON, MA

Locality

File Number

Sponsor's Name

Phone

Street Address

City, State

	Acceptability Category	DNL	Predicted for Operations in Year
1. Roadway Noise	UNACCEPTABLE	76	1988
2. Aircraft Noise	ACCEPTABLE	59	1982 (see page 16)
3. Railway Noise	ACCEPTABLE	58	1988 (see page 25)

Value of DNL for all noise sources: (see page 3 for combination procedure) 76

Final Site Evaluation (circle one)

Acceptable

Normally Unacceptable

(Unacceptable)

Signature [illegible]

Date 5/5/85

REVISED
7/9/85

Clip this worksheet to the top of a package containing Worksheets B-E and Workcharts 1-7 that are used in the site evaluations

NOISE RECEPTORS 3+4

Worksheet C
Roadway Noise

Page 1

Noise Assessment Guidelines

1988 BUILD

List all major roads within 1000 ft of the site:

1. STUART STREET
2. DARTMOUTH STREET
3. ST JAMES AVENUE
4. CLARENDON STREET

Necessary Information	Road 1	Road 2	Road 3	Road 4
1. Distance in feet from the NAL to the edge of the road				
a. nearest lane	12	12	436	436
b. farthest lane	72	72	484	484
c. average (effective distance)	42	42	460	460
2. Distance to stop sign	-			
3. Road gradient in percent	0	0	0	0
4. Average speed in mph				
a. Automobiles	30	30	30	30
b. heavy trucks - uphill	-	-	-	-
c. heavy trucks - downhill	-	-	-	-
5. 24 hour average number of automobiles and medium trucks in both directions (ADT)				
a. automobiles	17845	16408	15519	18110
b. medium trucks	970	892	845	984
c. effective ADT (a + (10xb))	27545	25328	23969	27950
6. 24 hour average number of heavy trucks				
a. uphill				
b. downhill				
c. total	582	535	507	591
7. Fraction of nighttime traffic (10:00 p.m. to 7: a.m.)	DEFAULT			
8. Traffic projected for what year?	1988			

* WORST CASE

AUTOS = 87%
MT = 5%
+ HT = 8%
-(Parsons Materials personal communication 7/9/85)

RECEPTORS 3 + 4

orksheet C
oadway Noise

Page 2

Noise Assessment Guidelines

1986 BUILD

justments for Automobile Traffic

	9 Stop and-go Table 3	10 Average Speed Table 4	11 Night-Time Table 5	12 Auto ADT (line 5c)	13 Adjusted Auto ADT	14 DNL (Workchart 1)	15 Barrier Attenuation	16 Partial DNL
ad No. 1	—	.30	1.00	27545	3264	68	—	68
ad No. 2	—	.30	1.00	25328	7598	68	—	68
ad No. 3	—	.30	1.00	23999	7200	52	—	52
ad No. 4	—	.30	1.00	27950	8385	52	—	52

justments for Heavy Truck Traffic

	17 Gradient Table 6	18 Average Speed Table 7	19 Truck ADT / 2	20	21	22 Stop and-go Table 8	23 Night-Time Table 5	24 Adjusted Truck ADT	25 DNL (Work chart 2)	26 Barrier Attn.	27 Partial DNL
phill											
ad No. 1				Add .81		—	1.00	471	72	—	72
ownhill											
phill											
ad No. 2				Add .81		—	1.00	433	71	—	71
ownhill											
phill											
ad No. 3				Add .81		—	1.00	411	56	—	56
ownhill											
phill											
ad No. 4				Add .81		—	1.00	479	56	—	56
ownhill											

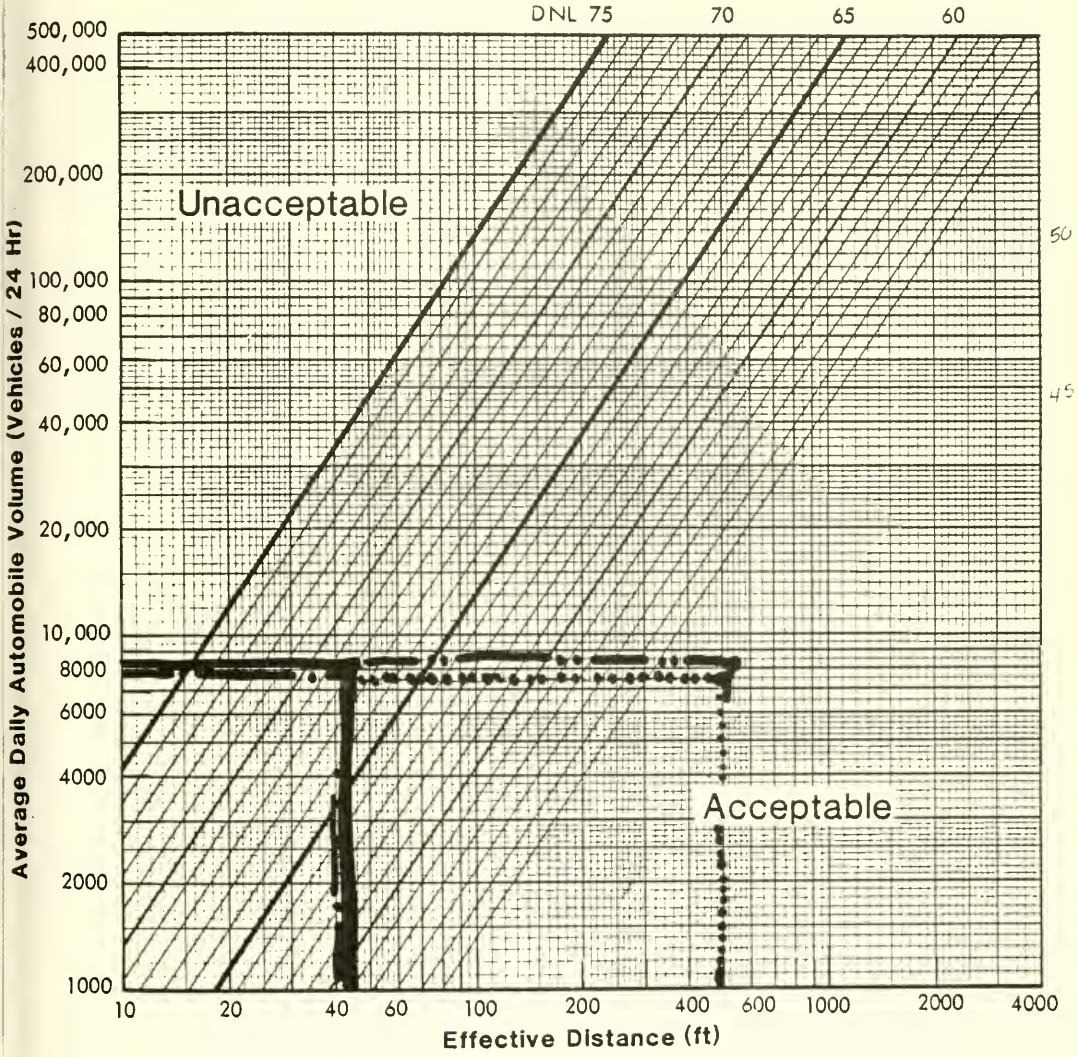
mbined Automobile & Heavy Truck DNL

ad No. 1 73 Road No. 2 73 Road No 3 57 Road No. 4 57 Total DNL for All Roads 76

gnature [signature] Date 12/5/85

revised 7/9/85

Workchart 1
Autos (55 mph)



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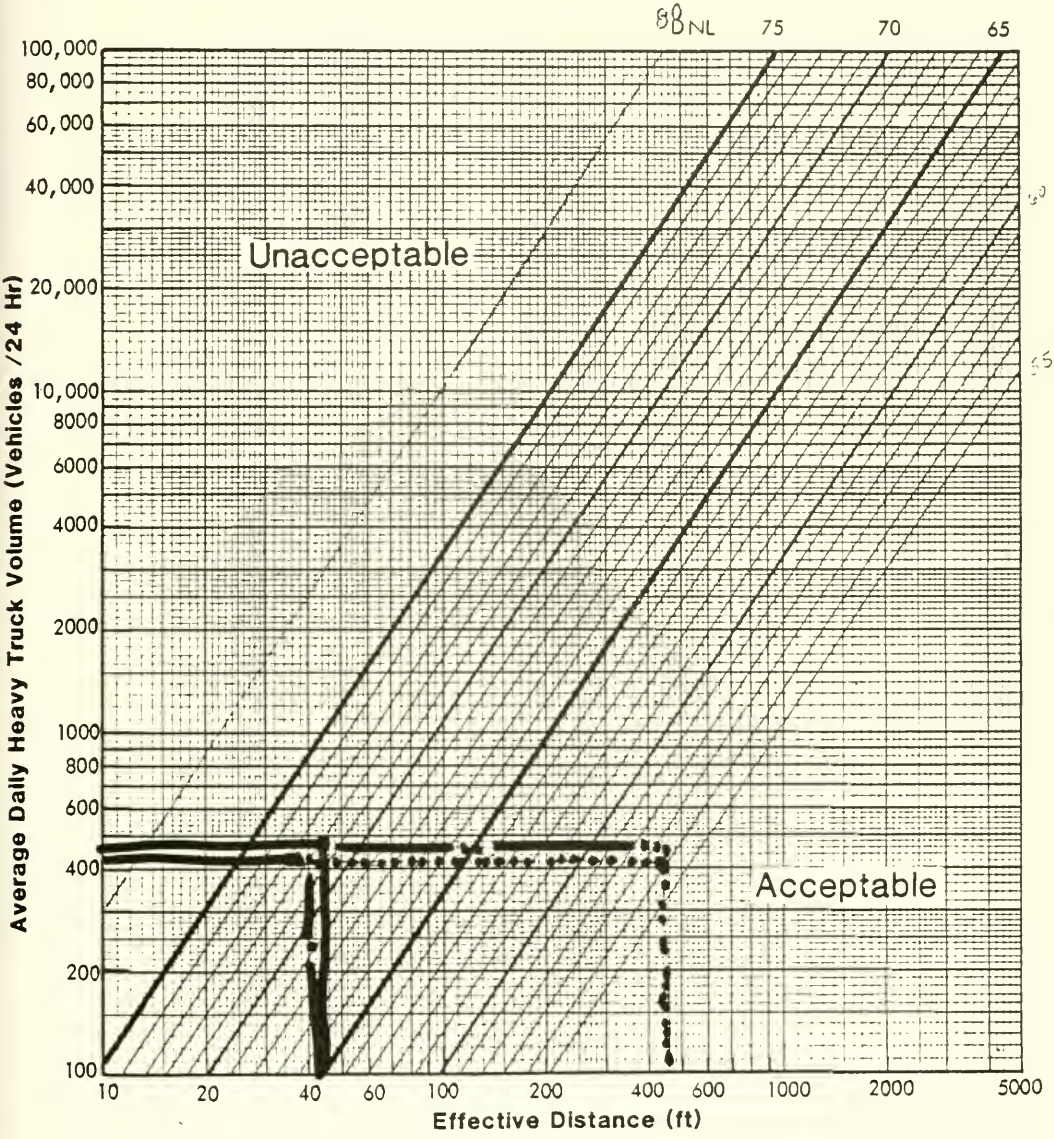
1988 BUILD
3+4

ROAD 1 ——————
ROAD 2 —— • ——
ROAD 3 ••••••••
ROAD 4 —— •• ——

Workchart 2
Heavy Trucks (55 mph)



ROAD 1 ——————
ROAD 2 — • —
ROAD 3 ....
ROAD 4

1988 BUILD
3+4

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